

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

CFA16-22 | Ladbroke to Handsacre

**Ecological baseline data: amphibians, reptiles and birds  
(EC-002-003)**

Ecology

November 2013

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Department  
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# Appendix EC-002-003

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Appendix name:	Ecological baseline data (CFA 16-22): amphibians, reptiles and birds	002-003
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# 1 Introduction

1.1.1 This document is an appendix which forms part of Volume 5 of the Environmental Statement (ES) for the Proposed Scheme. It details ecological baseline data collected for the following community forum area (CFA):

- CFA16: Ladbroke and Southam;
- CFA17: Offchurch and Cubbington;
- CFA18: Stoneleigh, Kenilworth and Burton Green;
- CFA19: Coleshill Junction;
- CFA20: Curdworth to Middleton;
- CFA21: Drayton Bassett, Hints and Weeford; and
- CFA22: Whittington to Handsacre.

1.1.2 The document should be read in conjunction with Volume 2 (Community forum area reports), Volume 3 (Route wide effects) and Volume 4 (Off-route effects).

## 2 Amphibians

### 2.1 Introduction

- 2.1.1 This section of the appendix presents details of the baseline information relating to amphibians<sup>1</sup> for the section of the Proposed Scheme that will pass through CFA16 to CFA22 inclusive.

### 2.2 Methodology

- 2.2.1 Details of the standard methodology utilised for amphibian surveys are provided in Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2).
- 2.2.2 Desk study information relating to amphibians was obtained from the following sources:
- Staffordshire Ecological Record;
  - Warwickshire Biological Records Centre;
  - Warwickshire amphibian and reptile recorder during a meeting arranged by Warwickshire Wildlife Trust/Warwickshire County Council; and
  - Amphibian surveys results from other developments in the area, detailed in the relevant baseline sections.
- 2.2.3 Records of amphibians from Warwickshire and Staffordshire were available within 5km of the centre-line of the route of the Proposed Scheme between CFA16 and 22.
- 2.2.4 An initial scoping exercise was conducted according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2) and the potential for impacts on all water bodies located within a 500m radius of the land required for the construction of the Proposed Scheme were considered.
- 2.2.5 While the water body search was undertaken within 500m of the land required for construction of the Proposed Scheme, for the vast majority of the alignment, habitat losses associated with those ponds located more than 250m from the alignment are considered unlikely to result in adverse effects.
- 2.2.6 For the purposes of the initial scoping exercise, those water bodies occurring over 250m from the land required for the construction of the Proposed Scheme were only scoped into the assessment where either:
- the terrestrial habitat around those ponds appeared to be of poor value for great crested newts, and areas of more suitable terrestrial habitat was present within the Proposed Scheme; or
  - the Proposed Scheme was considered to have the potential to fragment

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<sup>1</sup> Great crested newt (*Triturus cristatus*), smooth newt (*Lissotriton vulgaris*), palmate newt (*Lissotriton helveticus*), common frog (*Rana temporaria*), and common toad (*Bufo bufo*).

connectivity between ponds, such that there was a potential risk of fragmentation of metapopulations<sup>2</sup> through loss of terrestrial habitat; or

- a pond was considered to be part of a cluster of linked ponds, and so may form part of a great crested newt metapopulation.

2.2.7 The tables in the baseline section identify those ponds located more than 250m from the Proposed Scheme which were scoped into the assessment, and the rationale in each case for this decision for each area.

## 2.3 Deviations, constraints and limitations

2.3.1 Within each CFA there are locations where surveys have been constrained or limited and also where deviations to the methodology have occurred. The principal reasons for variation are:

- lack of access to land requiring survey;
- limitations set by landowners on the timing of access resulting in deviation from the standard methodology e.g. no torching possible due to cattle in the field at night, landowner not allowing egg strips to be placed in water bodies where no natural egg laying material is present, surveys not completed within the correct season due to timing of access;
- weather constraints e.g. high winds or heavy rain preventing torching, low temperatures preventing bottle trapping;
- landowner refusing access for bottle trapping and netting techniques due to the presence of fish in water bodies;
- access to water bodies restricted due to dense vegetation; and
- access to water bodies restricted due to health and safety constraints such as electric or barbed wire fencing and steep banks.

2.3.2 A scoping exercise was completed in 2012 and revised in 2013 s in order to identify water bodies within 500m of the land required for the construction of the Proposed Scheme. This was undertaken using aerial photography and Ordnance Survey mapping only and therefore some water bodies may have been missed. During the Phase 1 habitat surveys (Volume 5: Appendix EC-001-003, Section 4) additional water bodies were found and recorded and a Habitat Suitability Index (HSI)<sup>3</sup> assessment was undertaken. In addition to this a number of water bodies scoped in during the desk based exercise were found not to be present during the Phase 1 habitat surveys and these were scoped out of further survey.

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<sup>2</sup> A great crested newt metapopulation is a group of associated populations made up from newts which both breed in the ponds and live in the terrestrial habitat around a cluster of ponds. The newts are likely to return to the same pond each year; however, there may be some interchange of newts between the ponds within the metapopulation. Assumed metapopulations (AMP) have currently been identified based on a combination of desk based information and survey results.

<sup>3</sup> HSI is a quantitative (numerical index, between 0 and 1) method of evaluating habitat suitability for great crested newts developed by Oldham et al 2000. The method uses ten suitability indices known to affect great crested newts which then produce a score; a HSI of 1 is optimal habitat while a HSI of 0 is very poor habitat. This method is not a substitute for great crested newt surveys and is used only as guidance to assist in determining where great crested newt surveys may be required.

- 2.3.3 A number of water bodies were not surveyed within the times stated in Natural England guidance; two visits required between mid-April to mid-May for presence/absence and three visits required for population size class assessments during this period. In addition, a number of water bodies were surveyed fewer than the required four (presence/absence survey) or six (population assessment) times.
- 2.3.4 Table 1 sets out the details of those water bodies which were identified from the scoping methodology as requiring further survey (i.e. HSI or presence/absence survey) but could not be surveyed due to access limitations.

## Appendix EC-002-003 | Amphibians

Table 1: Summary of locations where requirement for amphibian survey was identified but no access was available for survey within CFA16 to CFA22 inclusive

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-116006	North of Wormleighton	SP 45541 53794	HSI + Presence / Absence	CFA16	26m south-west
030-AA-116007	North of Wormleighton	SP 45551 53782	HSI + Presence / Absence	CFA16	13m south-west
030-AA-116011	North of Wormleighton	SP 45554 53365	HSI + Presence / Absence	CFA16	220m south-west
030-AA-116013	South-west of Stoneton	SP 46166 54227	HSI + Presence / Absence	CFA16	189m north-east
030-AA-117002	North of Wormleighton	SP 45274 54167	HSI + Presence / Absence	CFA16	7m south-west
030-AA-117003	North of Wormleighton	SP 45155 54348	HSI + Presence / Absence + Population Size Class Assessment	CFA16	75m south-west
030-AA-117007	North of Wormleighton	SP 44907 54107	HSI + Presence / Absence + Population Size Class Assessment	CFA16	47m south-west
030-AA-117008	West of Stoneton	SP 45789 54349	HSI + Presence / Absence	CFA16	12m north-east
030-AA-118005	South-west of Priors Hardwick	SP 45426 55290	HSI + Presence / Absence	CFA16	246m north-east
030-AA-119005	North-west Priors Hardwick	SP 44470 56647	HSI + Presence / Absence	CFA16	219m north-east
030-AA-119006	North of Wormleighton	SP 43747 56338	HSI + Presence / Absence	CFA16	300m south-west
030-AA-119008	West of A42, north-west of Wormleighton	SP 42712 55272	HSI + Presence / Absence	CFA16	56m south-west
030-AA-119010	West of A423, south of Ladbroke	SP 42632 55671	HSI + Presence / Absence	CFA16	136m north-west
030-AA-120001	North-west of Priors Hardwick	SP 43914 56748	HSI + Presence / Absence + Population Size Class Assessment	CFA16	6m south-west
030-AA-120002	North-west of Priors Hardwick	SP 44142 56983	HSI + Presence / Absence + Population Size Class Assessment	CFA16	18m north-east
030-AA-120003	North-west of Priors Hardwick	SP 44045 56972	HSI + Presence / Absence + Population Size Class Assessment	CFA16	62m north-east
030-AA-120008	South of Ladbroke	SP 43482 56697	HSI + Presence / Absence	CFA16	310m south-west

<sup>4</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-120009	North-west of Priors Hardwick	SP 44319 57133	HSI + Presence / Absence	CFA16	116m north-east
030-AA-120010	South-east of Ladbroke	SP 44253 57342	HSI + Presence / Absence	CFA16	308m north-east
030-AA-120011	South of Ladbroke	SP 43318 56838	HSI + Presence / Absence	CFA16	231m south-west
030-AA-120012	South-east of Ladbroke	SP 44358 57582	HSI + Presence / Absence	CFA16	238m east
030-AA-120013	South-east of Ladbroke	SP 44327 57588	HSI + Presence / Absence	CFA16	210m east
030-AA-121002	East of Ladbroke Fox Covert	SP 43371 57537	HSI + Presence / Absence + Population Size Class Assessment	CFA16	Within land required
030-AA-121003	East of Ladbroke Fox Covert	SP 43227 57631	HSI + Presence / Absence + Population Size Class Assessment	CFA16	4m west
030-AA-121004	North of Ladbroke Fox Covert	SP 43409 58230	HSI + Presence / Absence + Population Size Class Assessment	CFA16	Within land required
030-AA-121006	Ladbroke Fox Covert	SP 42909 58031	HSI + Presence / Absence	CFA16	308m south-west
030-AA-121007	Ladbroke Fox Covert	SP 42730 58030	HSI + Presence / Absence	CFA16	351m south-west
030-AA-122003	North of Ladbroke Fox Covert	SP 43398 58502	HSI + Presence / Absence + Population Size Class Assessment	CFA16	42m north-east
030-AA-122005	Ladbroke Fox Covert	SP 42952 58368	HSI + Presence / Absence + Population Size Class Assessment	CFA16	12m west
030-AA-122006	Ladbroke Fox Covert	SP 42854 58349	HSI + Presence / Absence + Population Size Class Assessment	CFA16	30m south-west
030-AA-122007	East of Windmill Hill	SP 42859 58643	HSI + Presence / Absence + Population Size Class Assessment	CFA16	31m south-west
030-AA-122008	Ladbroke Fox Covert	SP 42840 58250	HSI + Presence / Absence + Population Size Class Assessment	CFA16	105m south-west
030-AA-122010	South of Windmill Hill	SP 42321 58835	HSI + Presence / Absence	CFA16	108m south-west
030-AA-122011	Windmill Hill	SP 42425 58948	HSI + Presence / Absence + Population Size Class Assessment	CFA16	13m west
030-AA-123003	North of Ladbroke	SP 41843 59622	HSI + Presence / Absence + Population Size Class Assessment	CFA16	63m south-west
030-AA-123005	North-west of Ladbroke	SP 41799 59555	HSI + Presence / Absence + Population Size Class Assessment	CFA16	70m south-west



## Appendix EC-002-003 | Amphibians

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-124006	West of Ladbroke	SP 41807 60667	HSI + Presence / Absence	CFA16	156m north-east
030-AA-124013	Southam	SP 41747 61074	HSI + Presence / Absence	CFA16	332m north-east
030-AA-124017	South of Southam	SP 41415 60588	HSI + Presence / Absence + Population Size Class Assessment	CFA16	34m north-east
030-AA-125003	Southam	SP 41505 60987	HSI + Presence / Absence	CFA16	206m north-east
030-AA-125006	Kineton Road Industrial Estate	SP 41200 61227	HSI + Presence / Absence	CFA16	193m north-east
030-AA-126001	West of A423 (Banbury Road), south of Southam	SP 39747 61643	HSI + Presence / Absence + Population Size Class Assessment	CFA16	56m south-west
030-AA-126002	West of A423 (Banbury Road), south of Southam	SP 39682 61673	HSI + Presence / Absence	CFA16	125m south-west
030-AA-127007	Bascote Heath	SP 39861 62613	HSI + Presence / Absence	CFA16	144m north-east
030-AA-127018	Bascote Heath	SP 39741 62710	HSI + Presence / Absence + Population Size Class Assessment	CFA16	212m north-east
030-AA-128001	West of Ufton Wood	SP 38414 62988	HSI + Presence / Absence	CFA16	183m south-west
030-AA-129001	East of Longhole Wood	SP 38398 63869	HSI + Presence / Absence + Population Size Class Assessment	CFA16	Within land required
030-AA-129003	South-east of Longhole Wood	SP 38130 63836	HSI + Presence / Absence + Population Size Class Assessment	CFA16	Within land required
030-AA-129006	North of Longhole Wood	SP 38331 64115	HSI + Presence / Absence	CFA17	125m north-east
030-AA-129007	North-east of Longhole Bridge	SP 38778 63734	HSI + Presence / Absence + Population Size Class Assessment	CFA16	69m north-east
030-AA-129008	North-east of Longhole Bridge	SP 38708 63750	HSI + Presence / Absence + Population Size Class Assessment	CFA16	67m north-east
030-AA-129009	South of Grand Union Canal, north of Ufton	SP 37722 63555	HSI + Presence / Absence	CFA16	415m south-west
030-AA-129010	South of Grand Union Canal, north of Ufton	SP 37739 63743	HSI + Presence / Absence	CFA16	253m south-west
030-AA-129011	North of Grand Union Canal, south of Print Wood	SP 38432 64400	HSI + Presence / Absence	CFA17	172m north-east
030-AA-129014	North of Grand Union Canal, south of Print Wood	SP 37924 63931	HSI + Presence / Absence + Population Size Class Assessment	CFA17	Within land required

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-129015	North of Grand Union Canal, south of Print Wood	SP 38135 63962	HSI + Presence / Absence + Population Size Class Assessment	CFA17	Within land required
030-AA-130001	South of Print Wood	SP 37839 64812	HSI + Presence / Absence	CFA17	127m south-west
030-AA-130002	South of Print Wood	SP 38244 64512	HSI + Presence / Absence + Population Size Class Assessment	CFA17	132m north-east
030-AA-130005	West of Welsh Road, south-east of Offchurch	SP 37441 64510	HSI + Presence / Absence + Population Size Class Assessment	CFA17	122m south-west
030-AA-131001	Sutton Spinney	SP 37376 65220	HSI + Presence / Absence + Population Size Class Assessment	CFA17	Within land required
030-AA-131005	South of Sutton Spinney	SP 36481 65328	HSI + Presence / Absence	CFA17	192m south-west
030-AA-131011	West of Sutton Spinney	SP 36970 65949	HSI + Presence / Absence + Population Size Class Assessment	CFA17	3m north-east
030-AA-131012	Sutton Spinney	SP 37459 65449	HSI + Presence / Absence + Population Size Class Assessment	CFA17	45m north-east
030-AA-132001	North of Offchurch	SP 36499 66017	HSI + Presence / Absence + Population Size Class Assessment	CFA17	27m south-west
030-AA-132008	North of Offchurch	SP 36406 66237	HSI + Presence / Absence + Population Size Class Assessment	CFA17	31m south-west
030-AA-133002	West of River Leam	SP 36030 67725	HSI + Presence / Absence	CFA17	65m north-east
030-AA-133005	West of River Leam	SP 36107 67728	HSI + Presence / Absence	CFA17	130m north-east
030-AA-134001	East of South Cubbington Wood	SP 35721 67960	HSI + Presence / Absence + Population Size Class Assessment	CFA17	90m north-east
030-AA-134002	North-east of South Cubbington Wood	SP 35669 68533	HSI + Presence / Absence + Population Size Class Assessment	CFA17	8m east
030-AA-134003	East of Cubbington, west of South Cubbington Wood	SP 35105 68380	HSI + Presence / Absence + Population Size Class Assessment	CFA17	4m west
030-AA-134004	South-west of Cubbington	SP 35232 67411	HSI + Presence / Absence + Population Size Class Assessment	CFA17	102m north-east
030-AA-134005	South-west of Cubbington	SP 35189 67503	HSI + Presence / Absence + Population Size Class Assessment	CFA17	12m west
030-AA-134006	North-east of South Cubbington Wood	SP 35991 68380	HSI + Presence / Absence	CFA17	348m north-east
030-AA-134007	North-east of South Cubbington Wood	SP 35900 68438	HSI + Presence / Absence	CFA17	240m north-east

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Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-135001	North-west of South Cubbington Wood	SP 35282 68821	HSI + Presence / Absence	CFA17	162m north-east
030-AA-135002	North of South Cubbington Wood	SP 35450 68926	HSI + Presence / Absence	CFA17	235m north-east
030-AA-135003	East of Cubbington	SP 34635 68434	HSI + Presence / Absence + Population Size Class Assessment	CFA17	237m south-west
030-AA-135005	North of North Cubbington Wood	SP 35227 69579	HSI + Presence / Absence + Population Size Class Assessment	CFA17	Within land required
030-AA-135008	South of Rugby Road, north of South Cubbington Wood	SP 35160 68998	HSI + Presence / Absence + Population Size Class Assessment	CFA17	70m south-east
030-AA-136001	North of Cubbington	SP 34157 69604	HSI + Presence / Absence	CFA17	171m south-west
030-AA-136002	North of Cubbington	SP 34321 69983	HSI + Presence / Absence + Population Size Class Assessment	CFA17	27m east
030-AA-136003	North of Cubbington	SP 33966 69955	HSI + Presence / Absence + Population Size Class Assessment	CFA18	Within land required
030-AA-136005	North of Cubbington	SP 34559 70057	HSI + Presence / Absence + Population Size Class Assessment	CFA18	21m north-east
030-AA-136006	North of Cubbington	SP 34519 70217	HSI + Presence / Absence	CFA18	26m north-east
030-AA-136007	South of Waverly Wood	SP 34722 70487	HSI + Presence / Absence	CFA18	199m north-east
030-AA-136008	North of Cubbington	SP 33927 69438	HSI + Presence / Absence + Population Size Class Assessment	CFA17	338m west
030-AA-136009	West of North Cubbington Wood	SP 34871 69817	HSI + Presence / Absence + Population Size Class Assessment	CFA18	132m east
030-AA-136011	Coventry Road	SP 34667 70291	HSI + Presence / Absence + Population Size Class Assessment	CFA18	94m east
030-AA-136012	South of Waverly Wood	SP 34823 70585	HSI + Presence / Absence	CFA18	295m north-east
030-AA-137012	West of Leicester Lane	SP 33622 69867	HSI + Presence / Absence + Population Size Class Assessment	CFA18	51m west
030-AA-137013	West of Leicester Lane	SP 34492 70530	HSI + Presence / Absence + Population Size Class Assessment	CFA18	Within land required
030-AA-138004	South-west of Brick Kiln Spinney	SP 32465 70692	HSI + Presence / Absence	CFA18	318m south-west
030-AA-139005	Stoneleigh Park	SP 32041 71747	HSI + Presence / Absence	CFA18	135m south-west

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-140003	North-west of A46	SP 31599 72990	HSI + Presence / Absence + Population Size Class Assessment	CFA18	16m north
030-AA-140007	East of A46/ West of Kings Wood	SP 31977 73045	HSI + Presence / Absence + Population Size Class Assessment	CFA18	113m north-east
030-AA-140012	West of Kenilworth	SP 31064 72201	HSI + Presence / Absence	CFA18	282m south-west
030-AA-140013	West of Kenilworth	SP 31067 72286	HSI + Presence / Absence	CFA18	288m south-west
030-AA-141010	South of Westly Bridge	SP 31666 73523	HSI + Presence / Absence	CFA18	195m north-east
030-AA-142006	Kenilworth	SP 30087 73410	HSI + Presence / Absence	CFA18	296m south-west
030-AA-142010	North-west of Kenilworth	SP 29816 73615	HSI + Presence / Absence	CFA18	179m west
030-AA-142012	Kenilworth	SP 29676 73622	HSI + Presence / Absence	CFA18	252m south-west
030-AA-143005	North of Crackley Wood	SP 29055 74335	HSI + Presence / Absence + Population Size Class Assessment	CFA18	85m south-west
030-AA-143006	North of Crackley Wood	SP 28961 74322	HSI + Presence / Absence	CFA18	136m south-west
030-AA-144004	South-west of Roughknowles Wood	SP 28035 74750	HSI + Presence / Absence + Population Size Class Assessment	CFA18	25m south-west
030-AA-144005	North of Red Lane	SP 27817 74822	HSI + Presence / Absence + Population Size Class Assessment	CFA18	98m south-west
030-AA-144012	North of Blind Lane	SP 28367 74614	HSI + Presence / Absence + Population Size Class Assessment	CFA18	39m south
030-AA-144013	South-west of Roughknowles Wood	SP 28316 74998	HSI + Presence / Absence + Population Size Class Assessment	CFA18	20m north-east
030-AA-145011	South of Burton Green	SP 27034 75361	HSI + Presence / Absence	CFA18	116m south-west
030-AA-145017	North-east of Black Waste Wood	SP 27663 76115	HSI + Presence / Absence	CFA18	345m north-east
030-AA-145018	East of Burton Green	SP 27604 75338	HSI + Presence / Absence + Population Size Class Assessment	CFA18	Within land required
040-AA-146006	South Burton Green	SP 26807 75439	HSI + Presence / Absence	CFA18	40m south-west
040-AA-147006	South of Beechwood	SP 25903 76868	HSI + Presence / Absence + Population Size Class Assessment	CFA18	54m north-east

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Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
040-AA-147007	South of Beechwood	SP 25923 76906	HSI + Presence / Absence + Population Size Class Assessment	CFA18	74m north-east
040-AA-147016	South-west of Beanit Spinney	SP 25684 76347	HSI + Presence / Absence	CFA18	112m south-west
040-AA-147018	South-west of Beanit Spinney	SP 25516 76346	HSI + Presence / Absence	CFA18	225m south-west
040-AA-147026	Hodgett's Lane, Beechwood	SP 25784 76859	HSI + Presence / Absence + Population Size Class Assessment	CFA18	13m north-east
040-AA-147030	West of Beanit Spinney	SP 25889 76500	HSI + Presence / Absence + Population Size Class Assessment	CFA18	35m south-west
040-AA-147031	South of Beanit Spinney	SP 25685 76231	HSI + Presence / Absence	CFA18	177m south-west
040-AA-147032	West of Beanit Spinney	SP 25940 76884	HSI + Presence / Absence + Population Size Class Assessment	CFA18	48m north-east
030-AA-161001	South-east of manor Drive	SP 19139 88226	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required
030-AA-161011	South-east of Manor Drive	SP 18747 88255	HSI + Presence / Absence	CFA19	156m south-west
030-AA-162001	South-west of Gilson	SP 19037 89781	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required
030-AA-163004	South of Chattle Hill	SP 18827 90310	HSI + Presence / Absence + Population Size Class Assessment	CFA19	103m west
030-AA-165001	North of Lichfield Road	SP 19034 91891	HSI + Presence / Absence + Population Size Class Assessment	CFA20	Within land required
030-AA-165003	North-east of Curdworth	SP 18373 92041	HSI + Presence / Absence + Population Size Class Assessment	CFA20	33m west
030-AA-165004	North-east of Curdworth	SP 18390 92150	HSI + Presence / Absence	CFA20	133m west
030-AA-165006	North-east of Curdworth	SP 18553 92112	HSI + Presence / Absence + Population Size Class Assessment	CFA20	64m West
030-AA-165008	North of Curdworth	SP 19084 92455	HSI + Presence / Absence + Population Size Class Assessment	CFA20	Within land required
030-AA-166002	East of Dunton Wood	SP 19696 93352	HSI + Presence / Absence	CFA20	266m east
030-AA-166007	South of Dunton	SP 19634 93357	HSI + Presence / Absence	CFA20	209m east
030-AA-166009	East of Dunton Wood	SP 19607 93162	HSI + Presence / Absence	CFA20	119m east

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-167031	South of M6 Toll	SP 19451 94121	HSI + Presence / Absence + Population Size Class Assessment	CFA20	34m east
030-AA-167034	Dunton Wood	SP 20277 94871	HSI + Presence / Absence + Population Size Class Assessment	CFA20	102m east
030-AA-167035	Dunton Wood	SP 20233 94736	HSI + Presence / Absence + Population Size Class Assessment	CFA20	108m east
030-AA-167036	Dunton Wood	SP 20303 94735	HSI + Presence / Absence + Population Size Class Assessment	CFA20	176m east
030-AA-168005	West of North Wood	SP 18983 95495	HSI + Presence / Absence + Population Size Class Assessment	CFA20	34m west
030-AA-168006	West of North Wood	SP 19055 95642	HSI + Presence / Absence + Population Size Class Assessment	CFA20	27m west
030-AA-168007	North of Marston Field Bridge	SP 19688 95122	HSI + Presence / Absence + Population Size Class Assessment	CFA20	Within land required
030-AA-168010	West of Bodymoor Heath	SP 19765 95636	HSI + Presence / Absence	CFA20	201m east
030-AA-168011	West of Bodymoor Heath	SP 19792 95692	HSI + Presence / Absence	CFA20	208m east
030-AA-168012	West of Bodymoor Heath	SP 20102 95797	HSI + Presence / Absence + Population Size Class Assessment	CFA20	Within land required
030-AA-168028	East of The Belfry	SP 20986 95013	HSI + Presence / Absence + Population Size Class Assessment	CFA20	395m east
030-AA-169001	North of North Wood	SP 19135 95941	HSI + Presence / Absence + Population Size Class Assessment	CFA20	8m east
030-AA-169006	West of Bodymoor Heath	SP 19529 96236	HSI + Presence / Absence	CFA20	124m east
030-AA-169009	The Belfry	SP 18529 95896	HSI + Presence / Absence	CFA20	64m west
030-AA-169010	The Belfry	SP 18441 96108	HSI + Presence / Absence	CFA20	52m west
030-AA-169011	The Belfry	SP 18514 96278	HSI + Presence / Absence	CFA20	35m west
030-AA-169012	Bodymoor Heath	SP 19612 97035	HSI + Presence / Absence	CFA20	364m east
030-AA-169013	The Belfry	SP 18497 96411	HSI + Presence / Absence	CFA20	62m west
030-AA-169014	North of The Belfry	SP 18732 96482	HSI + Presence / Absence + Population Size Class Assessment	CFA20	62m west

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Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-170014	North of Bodymoor Heath Training Ground	SP 18562 96893	HSI + Presence / Absence + Population Size Class Assessment	CFA20	36m west
030-AA-170017	Hunts Green	SP 18333 97249	HSI + Presence / Absence	CFA20	159m west
030-AA-170026	West Coneybury Wood	SP 18980 97163	HSI + Presence / Absence + Population Size Class Assessment	CFA20	29m east
030-AA-171015	West of Pool Head Plantation	SP 18936 98544	HSI + Presence / Absence + Population Size Class Assessment	CFA20	147m north-east
030-AA-171019	North-west of Middleton Park	SP 17972 98116	HSI + Presence / Absence	CFA20	177m south-west
030-AA-171020	Middleton	SP 18015 98105	HSI + Presence / Absence	CFA20	158m south-west
030-AA-172009	West of Middleton Park	SP 18697 99082	HSI + Presence / Absence	CFA21	395m north-east
030-AA-173004	East of Oakleigh	SP 17562 99904	HSI + Presence / Absence + Population Size Class Assessment	CFA21	33m north-east
030-AA-173005	East of Oakleigh	SK 17408 00129	HSI + Presence / Absence + Population Size Class Assessment	CFA21	11m north-east
030-AA-173006	East of Oakleigh	SK 17402 00113	HSI + Presence / Absence + Population Size Class Assessment	CFA21	8m north-east
030-AA-173007	South-east of Oakleigh	SK 17218 00087	HSI + Presence / Absence + Population Size Class Assessment	CFA21	Within land required
030-AA-173015	South-east of Loddy Wood	SP 16710 99723	HSI + Presence / Absence	CFA21	47m south-west
030-AA-173019	East of Oakleigh	SP 17552 99821	HSI + Presence / Absence + Population Size Class Assessment	CFA21	Within land required
030-AA-175004	West of Oakleigh	SK 16675 01420	HSI + Presence / Absence	CFA21	195m north-east
030-AA-175005	West of Oakleigh	SK 16390 01598	HSI + Presence / Absence	CFA21	86m north-east
030-AA-175006	West of Oakleigh	SK 16466 01350	HSI + Presence / Absence + Population Size Class Assessment	CFA21	30m east
030-AA-175007	West of Oakleigh	SK 16759 01680	HSI + Presence / Absence	CFA21	127m north-east
030-AA-175016	East of Roundhill Wood	SK 15964 01942	HSI + Presence / Absence + Population Size Class Assessment	CFA21	9m east
030-AA-176013	South-east of Roundhill Wood	SK 15734 01990	HSI + Presence / Absence + Population Size Class Assessment	CFA21	Within land required

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-178004	North of Hare Park Wood	SK 14283 04607	HSI + Presence / Absence	CFA21	200m west
030-AA-178005	North of Hare Park Wood	SK 14287 04644	HSI + Presence / Absence	CFA21	208m west
030-AA-178013	Hare Park Wood	SK 14250 04682	HSI + Presence / Absence	CFA21	227m west
030-AA-178017	East of Hare Park Wood	SK 14196 04327	HSI + Presence / Absence	CFA21	171m west
030-AA-179003	Hare Park Wood	SK 14330 05633	HSI + Presence / Absence	CFA21	237m west
030-AA-180001	West of Packington Moor	SK 14857 06451	HSI + Presence / Absence + Population Size Class Assessment	CFA21	Within land required
030-AA-180002	South-west of Packington Moor	SK 14434 06206	HSI + Presence / Absence + Population Size Class Assessment	CFA21	139m west
030-AA-183001	Fulfen wood	SK 14668 09656	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-183003	South-west of Whittington	SK 15042 08894	HSI + Presence / Absence	CFA22	128m east
030-AA-183007	North-east of Fulfen Wood	SK 14959 09492	HSI + Presence / Absence + Population Size Class Assessment	CFA22	32m east
030-AA-183008	North-east of Fulfen Wood	SK 14999 09516	HSI + Presence / Absence + Population Size Class Assessment	CFA22	56m east
030-AA-183010	East of Lichfield	SK 14401 09605	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-183016	North of Fulfen Wood	SK 15278 09723	HSI + Presence / Absence + Population Size Class Assessment	CFA22	90m east
030-AA-183021	East of Fulfen Wood	SK 14748 09439	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184001	North of Streethay	SK 14579 10131	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184002	West of Fulfen Wood	SK 14440 09654	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184003	North of Fulfen Wood	SK 14873 09742	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184004	North of Fulfen Wood	SK 14838 09821	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184007	North of Fulfen Wood	SK 15417 09794	HSI + Presence / Absence	CFA22	246m east



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Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-184008	West of Huddlesworth	SK 15567 09904	HSI + Presence / Absence	CFA22	175m east
030-AA-184011	North of Streethay	SK 15312 10541	HSI + Presence / Absence + Population Size Class Assessment	CFA22	136m east
030-AA-184012	East of Streethay	SK15233 10425	HSI + Presence / Absence + Population Size Class Assessment	CFA22	139m east
030-AA-184013	East of Streethay	SK 15312 10541	HSI + Presence / Absence + Population Size Class Assessment	CFA22	233m east
030-AA-184014	North of Streethay	SK 15019 10751	HSI + Presence / Absence + Population Size Class Assessment	CFA22	59m east
030-AA-184015	North of Streethay	SK 15638 10117	HSI + Presence / Absence + Population Size Class Assessment	CFA22	95m east
030-AA-184016	North of Streethay	SK 15508 10250	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184017	North of Streethay	SK 15761 10216	HSI + Presence / Absence + Population Size Class Assessment	CFA22	82m east
030-AA-184018	North of Streethay	SK 15823 10237	HSI + Presence / Absence + Population Size Class Assessment	CFA22	33m east
030-AA-184019	North of Streethay	SK 15898 10315	HSI + Presence / Absence + Population Size Class Assessment	CFA22	8m east
030-AA-184020	North of Streethay	SK 15844 10362	HSI + Presence / Absence + Population Size Class Assessment	CFA22	1m east
030-AA-184021	North of Streethay	SK 15852 10450	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-184022	North of Streethay	SK 15592 10495	HSI + Presence / Absence + Population Size Class Assessment	CFA22	110m east
030-AA-184023	North of Streethay	SK 15827 10681	HSI + Presence / Absence + Population Size Class Assessment	CFA22	72m east
030-AA-184024	North of Streethay	SK 15759 10694	HSI + Presence / Absence + Population Size Class Assessment	CFA22	115m east
030-AA-185001	North-east of Streethay	SK 14453 10812	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-185002	North-east of Streethay	SK 14370 10720	HSI + Presence / Absence + Population Size Class Assessment	CFA22	22m west
030-AA-185005	North-east of Streethay	SK 14722 10796	HSI + Presence / Absence + Population Size Class Assessment	CFA22	30m East
030-AA-185010	South of Rough Stookings	SK 14292 11451	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-185011	South of Rough Stookings	SK 14068 11486	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-185012	South of Rough Stookings	SK 14167 11504	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-185019	South of Fradley Park	SK 15752 11175	HSI + Presence / Absence	CFA22	141m east
030-AA-185020	South of Fradley Park	SK 15952 11310	HSI + Presence / Absence	CFA22	161m east
030-AA-185021	South of Fradley Park	SK 15960 11325	HSI + Presence / Absence	CFA22	158m east
030-AA-185022	South of Fradley Park	SK 16064 11460	HSI + Presence / Absence	CFA22	90m east
030-AA-185023	South of Fradley Park	SK 16201 11544	HSI + Presence / Absence	CFA22	82m east
030-AA-186004	North-west of Rough Stookings	SK 14390 11828	HSI + Presence / Absence	CFA22	7m north-east
030-AA-186008	West of Rough Stookings	SK 14047 12000	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-186013	East of Curborough	SK 13748 11578	HSI + Presence / Absence	CFA22	130m west
030-AA-186015	South-east of Little Lyntus Wood	SK 13380 11952	HSI + Presence / Absence + Population Size Class Assessment	CFA22	149m west
030-AA-186016	South-east of Little Lyntus Wood	SK 13221 12014	HSI + Presence / Absence + Population Size Class Assessment	CFA22	243m west
030-AA-186023	South-west of Fradley Park	SK 15491 11621	HSI + Presence / Absence + Population Size Class Assessment	CFA22	169m east
030-AA-186024	South-west of Fradley Park	SK 15564 11679	HSI + Presence / Absence + Population Size Class Assessment	CFA22	184m east
030-AA-186025	South-west of Fradley Park	SK 15532 11693	HSI + Presence / Absence + Population Size Class Assessment	CFA22	218m east
030-AA-186026	South-west of Fradley Park	SK 15522 11714	HSI + Presence / Absence + Population Size Class Assessment	CFA22	180m east
030-AA-186027	South-west of Fradley Park	SK 13320 11522	HSI + Presence / Absence + Population Size Class Assessment	CFA22	387m west
030-AA-186028	South-west of Fradley Park	SK 13275 11523	HSI + Presence / Absence + Population Size Class Assessment	CFA22	418m west
030-AA-186029	South-west of Fradley Park	SK 13238 11778	HSI + Presence / Absence + Population Size Class Assessment	CFA22	303m west

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Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-186030	South-west of Fradley Park	SK 13129 11750	HSI + Presence / Absence + Population Size Class Assessment	CFA22	416m west
030-AA-187012	South of Little Lyntus Wood	SK 13509 12755	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-187015	South of Little Lyntus Wood	SK 13299 12552	HSI + Presence / Absence	CFA22	117m south-west
030-AA-189014	East of Kings Bromley Marina	SK 12064 14325	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-189015	East of Kings Bromley Marina	SK 12039 14466	HSI + Presence / Absence	CFA22	191m north-east
030-AA-189023	East of Kings Bromley Marina	SK 12247 14253	HSI + Presence / Absence + Population Size Class Assessment	CFA22	98m north-east
030-AA-189031	East of Kings Bromley Marina	SK 12275 14285	HSI + Presence / Absence + Population Size Class Assessment	CFA22	67m north-east
030-AA-189034	East of Kings Bromley Marina	SK 12196 14684	HSI + Presence / Absence + Population Size Class Assessment	CFA22	1m north-east
030-AA-189035	South of Riley Hill	SK 12003 15025	HSI + Presence / Absence	CFA22	43m north-east
030-AA-189036	North of Kings Bromley Marina	SK 11494 14944	HSI + Presence / Absence	CFA22	55m north-east
030-AA-190003	South of Vicars Coppice	SK 10736 13351	HSI + Presence / Absence	CFA22	111m south-west
030-AA-190029	South of Vicars Coppice	SK 10945 13259	HSI + Presence / Absence	CFA22	329m south-west
030-AA-190030	East of Hanch	SK 10585 13261	HSI + Presence / Absence + Population Size Class Assessment	CFA22	37m south
030-AA-190031	East of Hanch	SK 10471 13241	HSI + Presence / Absence + Population Size Class Assessment	CFA22	11m south
030-AA-190032	East of Hanch	SK 10562 13424	HSI + Presence / Absence + Population Size Class Assessment	CFA22	15m south
030-AA-190033	South of Hanch	SK 10397 13381	HSI + Presence / Absence	CFA22	134m south
030-AA-190034	Hanch	SK 10218 13712	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-190035	South of Hanch	SK 10039 13722	HSI + Presence / Absence	CFA22	105m south
030-AA-190038	Kings Bromley Marina	SK 11349 14766	HSI + Presence / Absence	CFA22	64m north-east

Ecology survey code	Location	OS centroid grid reference	Initial survey prescription based on scoping exercise	CFA	Distance from the land required for construction of the Proposed Scheme <sup>4</sup> (m) and orientation
030-AA-190040	Kings Bromley Marina	SK 11328 14527	HSI + Presence / Absence + Population Size Class Assessment	CFA22	6m north-east
030-AA-190041	Kings Bromley Marina	SK 11240 14587	HSI + Presence / Absence	CFA22	23m north-east
030-AA-190042	North of King Bromleys Wharf	SK 11376 15203	HSI + Presence / Absence + Population Size Class Assessment	CFA22	58m north
030-AA-191013	South-east of Handsacre	SK 09967 14765	HSI + Presence / Absence + Population Size Class Assessment	CFA22	Within land required
030-AA-191014	South of Hanch	SK 09987 13746	HSI + Presence / Absence	CFA22	171m south
030-AA-191016	South of Hanch	SK 09927 13715	HSI + Presence / Absence	CFA22	197m south
030-AA-191017	South of Hanch	SK 09873 13658	HSI + Presence / Absence	CFA22	187m south
030-AA-192012	South-east of Handsacre	SK 09027 15662	HSI + Presence / Absence + Population Size Class Assessment	CFA22	90m north-east
030-AA-192013	South-east of Handsacre	SK 08798 15698	HSI + Presence / Absence	CFA22	291m south-west
030-AA-195010	North-east of Smiths Wood	SP 17625 89899	HSI + Presence / Absence	CFA19	112m south
030-AA-209005	Water Orton	SP 17043 91042	HSI + Presence / Absence	CFA19	269m north
030-AA-210006	Water Orton	SP 18657 90650	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required
030-AA-210007	Water Orton	SP 18665 90656	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required
030-AA-211001	North of Water Orton	SP 18982 91049	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required
030-AA-211008	North of Water Orton	SP 19113 90876	HSI + Presence / Absence + Population Size Class Assessment	CFA19	Within land required

## 2.4 Baseline

### CFA16 Ladbroke and Southam

#### Scoping

2.4.1 A total of 153 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 153 water bodies, 35 were scoped out of further assessment due to their distance from the Proposed Scheme or the presence of physical barriers between the water bodies and the Proposed Scheme. A further 22 were scoped out following walkover surveys. The remaining 96 water bodies were scoped in for further assessment, as follows:

- 20 water bodies within the land required for construction of the Proposed Scheme;
- 31 water bodies between the land required for construction of the Proposed Scheme and 100m;
- 28 water bodies between 100m and 250m from the land required for construction of the Proposed Scheme; and
- 17 water bodies between 250m and 500m from the land required for construction of the Proposed Scheme

2.4.2 Table 2 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the land required for construction of the Proposed Scheme.

Table 2: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA16

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>5</sup> (m) and orientation
030-AA-118004	North-west of Stoneton	SP 45338 55392	Good connectivity to Proposed Scheme, with limited suitable habitat near water body	262m east
030-AA-119006	South of Ladbroke	SP 43747 56339	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	300m south-west
030-AA-120008	South of Ladbroke	SP 43483 56698	Available suitable terrestrial habitat is immediately adjacent or just within the land required	310m south-west
030-AA-120010	South of Ladbroke	SP 44253 57342	Good habitat connectivity to Proposed Scheme, with available habitat within land required	308m north-east
030-AA-121006	Ladbroke Fox Covert	SP 42909 58032	Available suitable terrestrial habitat is immediately adjacent or just within the land required	308m south-west

<sup>5</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>5</sup> (m) and orientation
030-AA-121007	Ladbroke Fox Covert	SP 42730 58031	Available suitable terrestrial habitat is immediately adjacent or just within the land required	351m south-west
030-AA-123010	East of A423	SP 42429 59944	Good habitat connectivity to Proposed Scheme, with available habitat within land required	257m north-east
030-AA-124013	Southam	SP 41748 61075	Limited terrestrial habitat within 250m.	332m north-east
030-AA-124015	West of A423 (Banbury Road), south of Southam	SP 41123 59953	Good habitat connectivity to Proposed Scheme within limited habitat available near	311m south-west
030-AA-125011	Southam	SP 41591 61039	Limited terrestrial habitat within 250m.	274m north-east
030-AA-126011	North Thorpe Bridge	SP 40423 61769	Good habitat connectivity to Proposed Scheme	260m north-east
030-AA-127002	South-East of Bascote Heath	SP 40182 62372	Available suitable terrestrial habitat is immediately adjacent to the land required	391m north-east
030-AA-127006	South-East of Bascote Heath	SP 40213 62329	Available suitable terrestrial habitat is immediately adjacent to the land required	424m north-east
030-AA-127020	Bascote Heath	SP 38980 61985	Good habitat connectivity to Proposed Scheme with available habitat located within land required	283m south-west
030-AA-128013	Long Itchington and Ufton Wood	SP 38565 62676	Available suitable terrestrial habitat is within the land required	369m south-west
030-AA-129009	Centenary Way	SP 37722 63556	Available suitable terrestrial habitat is within the land required	415m south-west
030-AA-129010	South of Grand Union Canal, north of Ufton	SP 37739 63743	Good habitat connectivity with suitable habitat located within land required	253m south-west

### *Field survey*

#### **HSI/walkover**

2.4.3 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 22 water bodies were scoped out of further assessment, as shown in Table 3.

Table 3: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA16

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>6</sup> (m) and orientation
030-AA-117004	North of Wormleighton	SP 45484 54856	Unsuitable canal	Within land required
030-AA-117005	East of Wormleighton	SP 45252 53763	Water body dry	187m west
030-AA-118001	North Wormleighton	SP 45019 55257	Unsuitable canal	11m east
030-AA-118002	North-West Wormleighton	SP 44450 55356	Unsuitable canal	44m east
030-AA-118003	North of Wormleighton	SP 43965 55390	Unsuitable canal	453m west
030-AA-119004	North of Wormleighton	SP 44696 55970	Water body dry	115m east
030-AA-123009	North-east of Ladbroke	SP 42541 59614	Flowing water body	80m east
030-AA-124014	West of A423, Banbury Road	SP 41110 59933	Water body not present	320m south-west
030-AA-124016	West of A423, Banbury Road, south of Southam	SP 41138 59940	Water body dry	294m west
030-AA-125002	East of Southam	SP 41257 60780	Water body dry	29m north-east
030-AA-125004	South-east of Southam	SP 41220 60687	Water body dry	1m north-east
030-AA-126003	South Thorpe Bridge	SP 39652 60687	Water body dry	158m south-west
030-AA-127009	South of Bascote Heath	SP 39275 61813	Flowing water body	122m south-west
030-AA-127011	Bascote Heath	SP 39954 62582	Flowing water body	199m east
030-AA-127015	South of Bascote Heath	SP 39441 62298	Flowing stream	Within land required
030-AA-127017	South of Bascote Heath	SP 39657 62310	Water body dry	50m east
030-AA-127019	South of Bascote Heath	SP 39556 62462	Flowing water body	8m east
030-AA-127021	East of Ufton Wood	SP 39281 61888	Flowing water body	47m west
030-AA-128002	Within Long Itchington Wood	SP 38720 62828	Water body dry	153m west

<sup>6</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>6</sup> (m) and orientation
030-AA-128009	North-west of Long Itchington and Ufton Wood	SP 38502 63259	Flowing water body	Within land required
030-AA-128010	North-west of Long Itchington and Ufton Wood	SP 38548 63118	Flowing water body	Within land required
030-AA-129017	East of Print Wood	SP 38620 64005	Unsuitable canal	47m east

### **Presence/absence and population size class estimate surveys**

- 2.4.4 Presence/absence surveys were undertaken at 34 water bodies within the area. However four of these were scoped out during the presence/absence surveys due to the water bodies drying out during the survey period.
- 2.4.5 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present. The results of surveys for presence/absence and population size class assessment are detailed within Table 4.



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Table 4: Summary of results from surveys for amphibian presence/absence and population size class assessment within CFA16

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for construction of the Proposed Scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-121001	North-east Ladbroke Fox Covert	SP 43679 57559	P/A	3	11 June 2013	17 June 2013	0	0	0	0	0	Within land required
030-AA-122001	Lady Hill	SP 42790 58898	P/A	4	25 April 2012	16 May 2012	0	0	2 (L)*	0	0	Within land required
030-AA-122002	Windmill Hill	SP 42525 58974	PCS	6	16 April 2013	03 June 2013	11 (M)	6 (L)	1 (L)	0	0	Within land required
030-AA-122009	North-west Lady Hill	SP 43049 59302	PCS	6	16 April 2013	03 June 2013	12 (M)	16 (G)	0	0	0	184m north-east
030-AA-123001	East of A423	SP 42012 59842	PCS	6	16 April 2013	05 June 2013	16 (M)	3 (L)	0	0	0	Within land required
030-AA-123002	East of A423	SP 42339 59628	PCS	6	16 April 2013	05 June 2013	10 (S)	3 (L)	0	0	0	Within land required
030-AA-123007	East of A423	SP 42068 59806	PCS	6	16 April 2013	05 June 2013	2 (S)	1 (L)	0	0	0	Within land required
030-AA-123008	East of A423	SP 42370 59799	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	118m north-east
030-AA-123010	East of A423	SK 59956 59956	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	257m north-east
030-AA-123011	East of A423	SK 60009 60009	PCS	6	17 April 2013	04 June 2013	1 (S)	0	0	0	0	136m north-east
030-AA-124001	East of A423	SP 41788 60042	P/A	4	05 June 2013	24 June 2013	0	0	0	1	0	Within land required
030-AA-124002	East of A423	SP 41963 60002	PCS	6	17 April 2013	04 June 2013	1 (S)	0	0	0	1 (L)	Within land required

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for construction of the Proposed Scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-124005	West of A423	SP 41378 60000	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	77m south-west
030-AA-124008	South-west Southam	SP 40834 60077	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	138m south-west
030-AA-124011	South-west Southam	SP 41722 60304	P/A	1	09 July 2013	09 July 2013	0	0	0	0	0	Within land required
030-AA-124012	South-west Southam	SP 41796 60262	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	4m east
030-AA-124015	West of A423	SP 41123 59953	P/A	4	17 April 2013	15 May 2013	1 (S)	1 (L)	0	0	0	311m south-west
030-AA-125001	South-west of Southam, north-east of B4451	SP 41010 60866	P/A	4	17 April 2013	15 May 2013	0	1 (L)	0	1	0	Within land required
030-AA-125009	North of A425	SP 40433 61506	P/A	3	11 June 2013	20 June 2013	12 (M)	0	0	1	1 (L)	45m north
030-AA-125010	North of A425	SP 40401 61515	P/A	3	11 June 2013	20 June 2013	0	0	0	0	0	46m north
030-AA-125011	Southam	SP 41591 61039	P/A	2	24 June 2013	26 June 2013	0	0	0	0	0	274m north-east
030-AA-125012	South-east Southam	SP 41170 60624	P/A	2	24 June 2013	26 June 2013	0	0	0	0	0	Within land required
030-AA-126011	West of Southam, North of Leamington Road ( A425)	SP 40423 61770	P/A	1	25 June 2013	25 June 2013	0	0	0	2	0	260m north-east
030-AA-127001	South of Bascote Heath	SP 39521 62316	PCS	6	23 April 2013	31 May 2013	4 (S)	40 (G)	0	4	28 (G)	57m west
030-AA-127002	South-east of Bascote Heath	SP 40182 62372	P/A	4	18 April 2013	28 May 2013	15 (M)	6 (L)	2 (L)	36	4 (L)	391m north-east

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for construction of the Proposed Scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-127006	South-east of Bascote Heath	SP 40213 62329	P/A	4	18 April 2013	28 May 2013	10 (S)	28 (G)	16 (G)	24	3 (L)	424m north-east
030-AA-127014	South of Bascote Heath	SP 39277 62399	P/A	1	09 July 2013	09 July 2013	0	0	0	0	0	Within land required
030-AA-127016	South of Bascote Heath	SP 39585 62345	P/A	4	18 April 2013	28 May 2013	0	1	0	1	1 (L)	33m east
030-AA-127020	Bascote Heath	SP 38980 61985	P/A	4	18 April 2013	23 May 2013	0	1 (L)	0	0	9 (L)	283m south-west
030-AA-128007	North-west boundary of Long Itchington and Ufton Wood, west of Welsh Road	SP 38789 63176	P/A	4	08 May 2013	30 May 2013	0	0	0	0	0	Within land required
030-AA-128008	North of Long Itchington and Ufton Wood, west of Welsh Road	SP 39069 63609	P/A	4	18 April 2013	23 May 2013	0	0	0	0	0	220m north-east
030-AA-128011	North of Long Itchington and Ufton Wood, west of Welsh Road	SP 39037 63359	P/A	4	18 April 2013	23 May 2013	0	0	0	0	1 (L)	242m north-east
030-AA-128012	Within Long Itchington and Ufton Wood	SP 38985 63220	P/A	4	08 May 2013	30 May 2013	0	0	0	0	1 (L)	135m north-east
030-AA-128013	Within Long Itchington and Ufton Wood	SP 38565 62676	P/A	3	22 May 2013	03 June 2013	0	31 (G)	0	0	1 (L)	369m south-west

Key:

\*Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;

- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);

- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and

- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

A full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.6 Great crested newts have been found in 12 of the 34 water bodies surveyed: there are five medium population size classes and seven small population size classes. In addition, nine of the water bodies were found to contain other amphibians (smooth newts in four of the water bodies, palmate newts in one, frogs in four and toads in five).

### *Desk study*

- 2.4.7 Warwickshire Biological Records Centre provided 278 amphibian records within 5km of the land required for the construction of the Proposed Scheme.
- 2.4.8 Of these, 175 lie within 1km of the land required for the construction of the Proposed Scheme. Table 5 details the records of great crested newts and good or exceptional populations (where this data is provided) of other amphibians within 1km of the land required for the construction of the Proposed Scheme.

Table 5: Selected desk study records within 1km of the land required for construction of the Proposed Scheme within CFA16

Number of records	Common name	Peak count	Year of record	Distance (m) and orientation from the land required for construction of the Proposed Scheme	Nearest water body
1	Great crested newt	2	1999	628m south	030-AA-122004
1	Great crested newt	1	2010	290m north-east	030-AA-125002
1	Great crested newt	1	2010	480m north-east	030-AA-125003
1	Great crested newt	1	2010	570m north-east	90m from 030-AA-125003
108	Great crested newt	15 juvenile/ 300 eggs	2003- 2005	537m south	30m from 030-AA-126006
2	Great crested newt	3	1999	960m south-west	510m from 030-AA-122010

- 2.4.9 In addition, anecdotal information obtained from local recorders during a meeting with Warwickshire Wildlife Trust and Warwickshire County Council identified a large translocated great crested newt population present close to Monkey Barn Farm and adjacent landfill. This is situated 800m south of Long Itchington and Ufton Woods, south of the A425 and to the west of the Proposed Scheme. Several amphibian records are located here<sup>7</sup>.
- 2.4.10 A review has been undertaken of developments within 1km of the land required for construction of the Proposed Scheme in order to obtain any relevant amphibian survey information. The developments which have records of great crested newt surveys with results available are detailed in Table 6.

<sup>7</sup> Personal communication with Warwickshire reptile and amphibian recorder during a meeting arranged by Warwickshire County Council/Warwickshire Wildlife Trust in June 2012.

Table 6: Summary of amphibian survey results from other developments in CFA16

CFA	Committed Development Reference	Development description	Water body reference	Results including year of survey
CFA16	12/01500/ful	Erection of 9 wind turbines up to a maximum tip height of 125 metres, and other ancillary development including a new vehicular access from the A423 south of Fenny Compton Wharf, access tracks, vehicular access from the C35 east of Wormleighton, crane hardstandings, bridge crossing of the Oxford Canal, control building, cabling, construction compound and permanent meteorological mast.	030-AA-116002	Three female and 12 male great crested newts, great crested newt eggs and one female smooth newt (2011)
			030-AA-116003	No amphibians found (2011)
			030-AA-116006	No amphibians found (2011)
			030-AA-116007	One female smooth newt (2011)
			030-AA-116012	No amphibians found (2011)
			030-AA-117001	No amphibians found (2011)
			030-AA-117002	One female and five male great crested newts and two female and one male smooth newts (2011)
CFA16	13/00809/ful	Hybrid Planning Application (part full, part outline) for mixed use development comprising (1) Full Planning Application for Demolition of existing football stadium and bowling facilities, together with provision of new replacement pitches and facilities, to include hub building, maintenance building with associated groundsman's flat, covered terrace, relocated stand, floodlighting consisting of 8 x 15m high columns, new bow16 club building and telecom mast relocation. 240 residential properties. Public open space, landscaping and associated engineering works, including formation of 2 x new accesses. (2) Outline Planning Application for B1 + B2 + B3 commercial uses on approximately 1.62 ha of land.	030-AA-124017	No great crested newts found (2012)
			030-AA-125003	Great crested newts found (2012)

### Discussion of combined results

- 2.4.11 Given the records provided from Warwickshire Biological Records Centre it appears that great crested newts are abundant within Warwickshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.12 Local Wildlife Site (LWS) selection criteria for Warwickshire were reviewed to identify any sites that may qualify under the criteria. The criteria state that water bodies with breeding populations of internationally or nationally rare species would be selected as LWS. Within this area seven water bodies, as shown in Table 7, meet these criteria due to the presence of breeding great crested newts.

Table 7: Summary of those water bodies which meet the Warwickshire LWS criteria within CFA16

Pond reference	Distance from Proposed Scheme (m) and orientation	Findings
030-AA-122002	Within land required	Medium population size class of great crested newt, smooth newt and palmate
030-AA-122009	184 north-east	Medium population size class of great crested newt and smooth newt
030-AA-123001	Within land required	Medium population size class of great crested newt and smooth newt
030-AA-123002	Within land required	Small population size class of great crested newt and smooth newt
030-AA-127001	57 east	Small population size class of great crested newt, smooth newt, common frog and common toad
030-AA-127002	391 north-east	Medium population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-127006	424 north-east	Small population size class of great crested newt, smooth newt, palmate newt, common frog and common toad

2.4.13 Water bodies that are known to support great crested newt populations have been separated into clusters which are likely to support metapopulations. A metapopulation is a group of associated populations made up from newts which both breed in the ponds and live in the terrestrial habitat around a cluster of ponds. The newts are likely to return to the same pond each year. However, there may be some interchange of newts between the ponds within the metapopulation. The assumed metapopulations (AMP) have been assigned from desk top study and aquatic survey results only, according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.

2.4.14 Within this area there are six assumed great crested newt metapopulations. Table 8 summarises these great crested newt metapopulations and details the associated population size classes. The population size class has been estimated using the sum of the peak counts from all known great crested newt populations from a single nights survey visit within the assumed metapopulation.

Table 8: Summary of assumed great crested newt metapopulations within CFA16

Assumed metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme <sup>8</sup> (m) and orientation
AMP1	Near Windmill Hill Spinney east of Ladbroke	030-AA-122002, 030-AA-122010, 030-AA-122011	Medium (peak count 11)	Within land required

<sup>8</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Assumed metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme <sup>8</sup> (m) and orientation
AMP <sub>2</sub>	East of Southam Road, A423 to the north of Ladbroke	030-AA-123001, 030-AA-123002, 030-AA-123003, 030-AA-123005, 030-AA-123007, 030-AA-123008, 030-AA-123010, 030-AA-123011, 030-AA-124001, 030-AA-124002	Medium (peak count 30, made up of one medium, 16, and four small, 10, 2, 1, 1)	Within land required
AMP <sub>3</sub>	West of Southam Road, A423 to the north of Ladbroke	030-AA-124005, 030-AA-124015	Small (peak count 1)	150 west
AMP <sub>4</sub>	North of Leamington Road, A425, west of Southam	030-AA-125009, 030-AA-125010	Medium (peak count 12)	Within land required
AMP <sub>5</sub>	South-east of Bascote Heath to the south of Welsh Road	030-AA-127002, 030-AA-127006	Medium (peak count 25, made up of one medium, 15, and one small, 10)	120 east
AMP <sub>6</sub>	South of Bascote Heath to the north of Leamington Road, A425	030-AA-127001, 030-AA-127014, 030-AA-127012, 030-AA-127016	Small (peak count 4)	Within land required

## CFA17 Offchurch and Cubbington

### Scoping

2.4.15 A total of 58 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 59 water bodies, 15 have been scoped out of further assessment due to distance from the Proposed Scheme or the presence of physical barriers between the water bodies and the Proposed Scheme. Of the remaining 43 water bodies, a further five were scoped out following walkover surveys. The remaining 38 water bodies scoped in for further assessment:

- four water bodies within the land required for construction of the Proposed Scheme;
- 15 water bodies between the land required for construction of the Proposed Scheme and 100m;
- 16 water bodies between 100m and 250m from the land required for construction of the Proposed Scheme; and
- three water bodies between 250m and 500m from the land required for construction of the Proposed Scheme.

- 2.4.16 Table 9 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the land required for construction of the Proposed Scheme.

Table 9: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA17

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>9</sup> (m) and orientation
030-AA-132005	North of Offchurch	SP 35870 66067	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	385 west
030-AA-134006	North-east of South Cubbington Wood	SP 35991 68380	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	348 north-east
030-AA-136008	North of Cubbington	SP 33927 69438	Good habitat connectivity and available suitable terrestrial habitat is within the land required	330 east

### Field survey

#### HSI/walkover

- 2.4.17 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, five water bodies were scoped out of further assessment, as detailed in Table 10.

Table 10: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA17

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>8</sup> (m) and orientation
030-AA-129002	North of Longhole Bridge	SP 38314 63933	Canal	8m north-east
030-AA-129004	South of Longhole Bridge	SP 37868 63895	Canal	10m north-east
030-AA-132004	North of Offchurch	SP 36266 66136	Flowing water body	Within land required
030-AA-132007	East of River Leam	SP 36586 66988	Flowing water body	8m east
030-AA-136010	North-west of Cubbington	SP 34714 69820	Flowing water body	136m north-east

#### Presence/absence and population size class estimate surveys

- 2.4.18 Presence/absence surveys were undertaken at six water bodies within the area. One of these surveys was undertaken during the correct time of year (030-AA-132002), the remaining five water bodies were surveyed an insufficient number of times and or the visits were unable to follow Natural England survey guidance.
- 2.4.19 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present.

<sup>9</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.



- 2.4.20 The results of surveys for presence/absence and population size class assessment are detailed within Table 11.

Table 11: Summary of results from surveys for amphibian presence/absence and population size class assessment within CFA17

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>10</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-131004	East of Highfield	SP 38439 64808	P/A	4	10 June 2013	19 June 2013	0	1 (L)	0	0	0	81m south-west
030-AA-131013	East of Offchurch	SP 37124 64998	P/A	2	13 June 2013	17 June 2013	0	0	0	0	0	56m south-west
030-AA-132002	East of River Leam	SP 36541 66837	P/A	4	23 April 2013	21 May 2013	0	15 (G)	1 (L)	0	0	124m north-east
030-AA-132005	North of Offchurch	SP 35870 66067	P/A	1	24 July 2013	-	0	0	0	0	0	385m west
030-AA-135006	South Cubbington wood	SP 35231 68974	P/A	1	11 July 2013	-	2 (S)	1 (L)	0	1	0	141m north-east
030-AA-135007	South Cubbington wood	SP 35162 68939	P/A	1	11 July 2013	-	0	0	0	0	1 (L)	110m north-east

Key:

\*Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

A full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

<sup>10</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

### *Desk study*

- 2.4.21 Warwickshire Biological Records Centre provided 278 amphibian records within 5km of the land required for the construction of the Proposed Scheme.
- 2.4.22 Only one of the current records lies within 1km of the land required for the construction of the Proposed Scheme. This record is for one great crested newt recorded in 1999, 880m south of the land required for the construction of the Proposed Scheme.
- 2.4.23 A review has been undertaken of developments within 1km of the Proposed Scheme in order to obtain any relevant amphibian survey information. Within this area no developments have been identified with relevant amphibian survey information.

### *Discussion of combined results*

- 2.4.24 Given the records provided from Warwickshire Biological Records Centre it appears that great crested newts are abundant within Warwickshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.25 LWS criteria for Warwickshire were reviewed to identify any sites that may qualify under the criteria. The criteria state that water bodies with breeding populations of internationally or nationally rare species would be selected as LWS. Within this area one water body (030-AA-135006, surrounded by South Cubbington Woods) has a small population size class of great crested newts, a low population of smooth newts and common frog. No breeding was confirmed at this water body and therefore the water body does not meet the selection criteria. However, only one survey visit was undertaken at this water body in July and therefore it is considered likely that with full surveys this water could hold a larger breeding population of great crested newts.
- 2.4.26 Water bodies that are known to support great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations (AMP) have been assigned from desk top study and aquatic survey results only, according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.
- 2.4.27 Within this area there is one assumed great crested newt metapopulation, AMP7. Table 12 summarises the assumed great crested newt metapopulation and details the associated population size class. The size class has been estimated using the sum of the peak counts from all known great crested newt populations from a single nights survey visit within the assumed metapopulation.

Table 12: Summary of assumed great crested newt metapopulations within CFA17

CFA	Assumed Metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme (m) and orientation
CFA17	AMP7	South Cubbington wood	030-AA-135001, 030-AA-135002, 030-AA-135006, 030-AA-135007, 030-AA-135008	Small (peak count of 2)	Within land required

## CFA18 Stoneleigh, Kenilworth and Burton Green

### Scoping

2.4.28 A total of 187 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 188 water bodies, 42 have been scoped out of further assessment due to distance from the Proposed Scheme and or the presence of physical barriers between the water bodies and the Proposed Scheme. Of the remaining 145 water bodies, a further 24 were scoped out following walkover surveys. The remaining 121 water bodies were scoped in for further assessment:

- 18 water bodies within the land required for construction of the Proposed Scheme;
- 54 water bodies between the land required for construction of the Proposed Scheme and 100m;
- 34 water bodies between 100m and 250m from the land required for construction of the Proposed Scheme; and
- 15 water bodies between 250m and 500m from the land required for construction of the Proposed Scheme

2.4.29 Table 13 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the Proposed Scheme.

Table 13: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA18

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>11</sup> (m) and orientation
030-AA-136012	South of Waverly Wood	SP 34823 70585	Scope out	295m north-east
030-AA-137008	South-east of Stoneleigh Park	SP 33157 70550	Good habitat connectivity to the Proposed Scheme	286m south-west
030-AA-138002	South-east of Stoneleigh Park	SP 33061 70656	Part of woodland containing pond is within the land required	314m south-west
030-AA-138004	South-west of Brick Kiln Spinney	SP 32465 70692	Scope out	318m south-west
030-AA-139007	Stoneleigh Park	SP 31823 71768	Good connectivity to the land required	355m south-west
030-AA-140012	West of South Crest	SP 31065 72201	Good connectivity to the land required, nearest habitat is joined to habitat lost	282m south-west
030-AA-140013	West of South Crest	SP 31068 72287	Good connectivity to the land required, nearest habitat is joined to habitat lost	288m south-west

<sup>11</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>11</sup> (m) and orientation
030-AA-141007	South-east of A429	SP 30925 73815	Connected to the land required by hedgerow, only just over 250m, not much suitable habitat around	270m north-east
030-AA-141011	South Westley Bridge	SP 31610 73633	Good connectivity to the land required	259m north-east
030-AA-142005	East of Coventry City	SP 30689 74172	Good habitat connectivity to land required	323m north-east
030-AA-142006	Kenilworth	SP 30087 73410	Scope out	296m south-west
030-AA-142012	Kenilworth	SP 29676 73622	Good habitat connectivity to land required	252m south-west
030-AA-143009	Between Blind Lane and Crackley Wood	SP 28754 74128	Habitat likely to be used is connected to the land required, and part to be lost	301m south-west
030-AA-143010	North of Kenilworth	SP 29059 74996	Nearest habitat is partly in the land required	269m north-east
030-AA-145017	West of Bockendon Road	SP 27664 76116	Habitat likely to be used is partly lost by the land required	345m north-east

### Field survey

#### HSI/walkover

2.4.30 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 24 water bodies were scoped out of further assessment, as detailed in Table 14.

Table 14: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA18

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>12</sup> (m) and orientation
030-AA-137014	South of Waverly Wood	SP 34383 70595	Flowing water body	85m north-east
030-AA-137015	South of Stareton	SP 33882 71101	Flowing water body	311m north-east
030-AA-139008	West of Stoneleight Park	SP 31918 72146	Dry	16m west
030-AA-140010	North-west of A46	SP 31325 72067	Flowing water body	70m south-west
030-AA-140015	North-east Kenilworth Golf Club	SP 31292 72949	Not present	Within land required
030-AA-140016	West of Kings Wood	SP 31672 73062	Not present	9m north-east
030-AA-141005	North-east of Kenilworth	SP 30609 73453	Not present	42m south-west

<sup>12</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>12</sup> (m) and orientation
030-AA-141006	North-east of Kenilworth	SP 30498 73531	Not present	42m south-west
030-AA-142001	North of Kenilworth	SP 30385 73816	Not present	Within land required
030-AA-142002	North of Kenilworth	SP 30409 73890	Not present	8m east
030-AA-143001	North of Crackley Wood	SP 29274 73992	Not present	37m south-west
030-AA-144011	North of Roughknowles Wood	SP 28884 75085	Not present	204m north-east
030-AA-145004	North-east of Broadwells wood	SP 27758 75729	Flowing water body	10m north-east
030-AA-145006	Burton Green	SP 27089 75682	Dry	Within land required
030-AA-145007	South of Broadwells Wood	SP 28079 75152	Flowing water body	36m north-west
030-AA-145019	West of Broadswell Wood	SP 27783 75324	Not present	Within land required
030-AA-145022	West of Brokendown Road	SP 27911 75906	Flowing water body	42m north-east
040-AA-146013	Burton Green	SP 27023 75679	Dry	Within land required
040-AA-146014	Burton Green	SP 27011 75898	Dry	18m east
040-AA-147017	South of Waste lane, north-west of Burton Green	SP 25772 76420	Dry	47m south-west
040-AA-147027	Waste Lane	SP 25652 76859	Flowing water body	Within land required
040-AA-147034	Waste Lane	SP 25720 76748	Dry	Within land required

### Presence/absence and population size class estimate surveys

- 2.4.31 Presence/absence surveys were started on 74 water bodies within the area.
- 2.4.32 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present
- 2.4.33 The results of surveys for presence/absence and population size class assessment are detailed within Table 15.

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Table 15: Summary of results from amphibian presence/absence and population size class estimate surveys within CFA18

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-137001	South-east of Stoneleigh Park	SP 33560 70402	PCS	6	23 April 2013	06 June 2013	29 (M)	26 (G)	3 (L)	2	1 (L)	12m west
030-AA-137002	North of Heathfield	SP 34021 70388	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-137003	South-east of Stoneleigh Park	SP 33545 70335	PCS	6	23 April 2013	06 June 2013	13 (M)	13 (G)	2 (L)	0	2 (L)	10m west
030-AA-137008	South-east of Stoneleigh Park	SP 33157 70550	P/A	4	23 April 2013	21 May 2013	0	2 (L)	0	5	16 (G)	286m south-west
030-AA-137009	South-east of Stoneleigh Park	SP 33223 70636	PCS	6	23 April 2013	06 June 2013	18 (M)	2 (L)	0	5	5 (L)	180m south-west
030-AA-137016	North of Heathfield	SP 34026 70402	P/A	3	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-138002	South-east of Stoneleigh Park	SP 33061 70656	P/A	4	23 April 2013	21 May 2013	10 (S)	13 (G)	0	1	8 (L)	314m south-west
030-AA-138009	South of Stareton	SP 33208 71541	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	147m north-east
030-AA-138013	Stoneleigh Park	SP 32752 71460	P/A	1	26 June 2013	26 June 2013	0	0	0	0	0	Within land required
030-AA-139002	Stoneleigh Park	SP 32468 72035	P/A	1	26 June 2013	26 June 2013	0	0	0	0	0	24m north-east
030-AA-139006	Motslow Hill Spinney	SP 32632 72354	P/A	1	26 June 2013	26 June 2013	3 (S)	0	0	0	1 (L)	127m north-east
030-AA-139007	West of Stoneleigh Park	SP 31822 71768	P/A	1	27 June 2013	27 June 2013	0	0	0	1	1 (L)	355m south-west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-139010	North of Stoneleigh Park	SP 32518 71806	P/A	4	23 April 2013	21 May 2013	0	2 (L)	0	0	3 (L)	Within land required
030-AA-140004	North-west of A46	SP 31594 73187	PCS	6	16 April 2013	03 June 2013	96 (M)	43 (G)	5 (L)	1	2 (L)	39m north-east
030-AA-140005	North-west of A46	SP 31595 73226	PCS	6	16 April 2013	03 June 2013	64 (M)	13 (G)	4 (L)	1	1 (L)	30m north-east
030-AA-140006	North-west of A46	SP 31629 73243	PCS	6	16 April 2013	03 June 2013	62 (M)	11 (G)	4 (L)	1	1 (L)	67m north-east
030-AA-140017	Kenilworth Golf Club	SP 31410 72631	P/A	3	02 May 2013	22 May 2013	0	5 (L)	0	0	0	115m west
030-AA-141001	South-east of A429	SP 30761 73423	P/A	2	17 April 2013	25 April 2013	0	0	0	0	0	Within land required
030-AA-141002	South-east of A429	SP 30717 73583	PCS	6	17 April 2013	04 June 2013	12 (M)	8 (L)	4 (L)	0	0	Within land required
030-AA-141003	South-east of A429	SP 31153 72979	PCS	6	16 April 2013	03 June 2013	1 (S)	1 (L)	0	0	0	79m south-west
030-AA-141004	South of Westerly Bridge	SP 31293 73258	P/A	4	18 June 2013	27 June 2013	0	0	0	1	0	10m east
030-AA-141007	South-east of A429	SP 30924 73814	P/A	1	18 June 2013	18 June 2013	0	0	0	0	0	270m north-east
030-AA-141008	West of Kenilworth Golf Club	SP 30951 73276	P/A	2	17 April 2013	24 April 2013	0	0	0	0	0	17m south-west
030-AA-141011	South Westley Bridge	SP 31625 73653	P/A	4	24 April 2013	22 May 2013	1 (S)	7 (L)	1 (L)	1	2 (L)	259m north-east
030-AA-142003	North of Milburn Grange	SP 30696 73923	PCS	6	03 May 2013	07 June 2013	3 (S)	0	0	0	1 (L)	222m north-east



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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-142004	North-west of A429	SP 29793 73839	PCS	6	10 June 2013	27 June 2013	1 (S)	7 (L)	0	4	1 (L)	45m west
030-AA-142005	East of Coventry City	SP 30689 74172	P/A	4	17 April 2013	15 May 2013	2 (S)	2 (L)	0	0	0	323m north-east
030-AA-143002	East of Crackley wood	SP 29312 74139	P/A	4	16 April 2013	14 May 2013	8 (S)	2 (L)	1 (L)	1	2 (L)	33m north-east
030-AA-143003	East of Crackley wood	SP 29120 74089	PCS	6	16 April 2013	14 May 2013	10 (S)	7 (L)	1 (L)	3	1 (L)	126m south-west
030-AA-143004	East of Crackley wood	SP 29057 74099	PCS	6	16 April 2013	14 May 2013	12 (M)	34 (G)	2 (L)	10	4 (L)	176m south-west
030-AA-143008	Crackley Wood	SP 29102 73784	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	215m south-west
030-AA-143009	Between Blind lane and Crackley wood	SP 28753 74127	P/A	4	16 April 2013	14 May 2013	1 (S)	4 (L)	0	2	0	301m south-west
030-AA-143010	North of Kenilworth	SP 29059 74995	P/A	4	16 April 2013	14 May 2013	0	9 (L)	0	0	0	269m north-east
030-AA-143012	South of Cryfield Grange	SP 29801 74499	P/A	4	16 April 2013	14 May 2013	0	0	0	0	1 (L)	32m north-east
030-AA-144001	South-east of Broadwells Wood	SP 28415 74834	P/A	4	16 April 2013	14 May 2013	0	0	0	1	0	Within land required
030-AA-144002	East of Broadwells wood	SP 28370 74895	P/A	4	16 April 2013	14 May 2013	0	6 (L)	0	1	0	Within land required
030-AA-144003	South-east of Broadwells Wood	SP 28064 74776	P/A	4	16 April 2013	14 May 2013	0	2 (L)	0	1	1 (L)	Within land required
030-AA-144006	East of Broadwells wood	SP 28346 75115	PCS	6	16 April 2013	13 June 2013	1 (S)	101 (E)	10 (G)	48	286 (G)	36m north-east

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-144007	West of Crackley wood, North of Kenilworth	SP 28562 74273	P/A	4	16 April 2013	14 May 2013	1 (S)	8 (L)	0	2	0	145m south-west
030-AA-144008	East of Broadwells wood	SP 28321 75384	P/A	4	16 April 2013	14 May 2013	0	17 (G)	0	9	35 (L)	209m north-east
030-AA-145001	South-west of Broadwells Wood	SP 27747 75465	P/A	4	16 April 2013	14 May 2013	0	4 (L)	0	0	1 (L)	8m east
030-AA-145005	South-east of Black Waste wood	SP 27513 75653	PCS	6	16 April 2013	03 June 2013	6 (S)	62	3 (L)	0	0	84m north-east
030-AA-145008	West of Bockendon Road	SP 27992 75776	P/A	4	16 April 2013	14 May 2013	1 (S)	1 (L)	0	1	0	119m north-east
030-AA-145010	West of Bockendon Road	SP 27616 75959	P/A	4	16 April 2013	14 May 2013	19 (M)	32 (G)	0	2	9	229m north-east
030-AA-145013	Between Red Lane and the dismantled railway	SP 27276 75302	P/A	4	25 April 2013	23 May 2013	0	0	0	2	11 (L)	104m south-west
030-AA-145014	West of Bockendon Road	SP 27823 75843	P/A	4	17 April 2013	15 May 2013	0	3 (L)	0	2	11 (L)	44m north-east
030-AA-145015	Between Red Lane and the dismantled railway	SP 27394 75159	PCS	6	17 April 2013	03 June 2013	9 (S)	20 (G)	1 (L)	0	0	113m south-west
030-AA-145023	South-east of Black Waste wood	SP 27718 75536	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	Within land required
040-AA-146002	Little Poors Wood	SP 26371 76122	P/A	4	07 May 2013	04 June 2013	0	0	0	2	0	7m west
040-AA-146003	North of Little Poors Wood	SP 26803 76357	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	187m south-west
040-AA-146004	North of Little Poors Wood	SP 26787 76377	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	180m north-east

## Appendix EC-002-003 | Amphibians

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
040-AA-146010	Big Pours Wood	SP 26269 75851	P/A	4	07 May 2013	04 June 2013	0	0	0	1	0	8m south-west
040-AA-146011	South of Beanit Spinney	SP 26091 76012	P/A	4	17 April 2013	15 May 2013	0	1 (L)	0	1	0	107m south-west
040-AA-146012	South of Beanit Spinney	SP 26067 75979	P/A	4	17 April 2013	15 May 2013	0	5 (L)	0	2	330 (G)	69m south-west
040-AA-146015	South of Beanit Spinney	SP 26184 75707	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	Within land required
040-AA-146019	Burton Green	SP 26914 75806	P/A	4	17 April 2013	15 May 2013	0	8 (L)	0	0	0	28m south-west
040-AA-146020	Burton Green	SP 26988 76004	PCS	6	25 April 2013	04 June 2013	1 (S)	3 (L)	0	1	1 (L)	53m north-east
040-AA-146021	North of Little Pours Wood	SP 26753 76157	P/A	4	17 April 2013	15 May 2013	0	2 (L)	0	2	1 (L)	41m north-east
040-AA-146022	North of Little Pours Wood	SP 26850 75974	P/A	4 )	25 April 2013	10 June 2013	0	6 (L)	0	0	0	11m north-east
040-AA-146023	North of Little Pours Wood	SP 26853 75980	P/A	4	25 April 2013	10 June 2013	0	8 (L)	0	4	0	17m north-east
040-AA-146024	Burton Green	SP 26958 75912	P/A	4	17 April 2013	15 May 2013	0	11 (G)	0	2	2 (L)	22m north-east
040-AA-146025	West of Little Pours Wood	SP 26626 75984	P/A	3	07 May 2013	23 May 2013	0	0	0	1	0	15m south
040-AA-146026	West of Burton Green	SP 26629 76528	P/A	4	06 June 2013	10 June 2013	0	0	0	0	0	99m north-east
030-AA-147001	West of Burton Green	SP 26245 76277	P/A	4	19 April 2012	21 May 2012	0	0	0	0	0	41m west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-147002	West of Burton Green	SP 25983 76369	P/A	4	19 April 2012	21 May 2012	0	2 (L)	0	1	0	21m south-west
030-AA-147003	West of Burton Green	SP 25972 76225	P/A	4	19 April 2012	21 May 2012	0	1 (L)	0	2	1 (L)	11m north
040-AA-147004	Hodgett's Lane, Beechwood	SP 26077 76859	P/A	4	17 April 2013	15 May 2013	0	23 (G)	0	4	38 (L)	85m north-east
040-AA-147005	Waste Lane	SP 25730 76776	P/A	4	06 June 2013	20 June 2013	0	2 (L)	0	1	1 (L)	Within land required
040-AA-147008	Hodgett's Lane, Beechwood	SP 25930 77017	P/A	1	27 June 2013	27 June 2013	1 (S)	6 (L)	0	2	0	173m north-east
040-AA-147009	South of Beanit Spinney	SP 26030 76007	PCS	6	17 April 2013	27 June 2013	8 (S)	9 (L)	0	2	6 (L)	61m south-west
040-AA-147014	South of Beanit Spinney	SP 25744 76272	P/A	3	21 May 2013	11 June 2013	1 (S)	0	0	0	1 (L)	106m south-west
040-AA-147028	Waste Lane	SP 25690 76816	P/A	4	10 June 2013	20 June 2013	0	0	0	3	1 (L)	Within land required
030-AA-147029	Waste Lane	SP 25842 76645	P/A	4	18 April 2012	21 May 2012	0	1	0	1	0	3m west
040-AA-147033	Hodgett's Lane, Beechwood	SP 26060 76837	P/A	3	25 April 2013	23 May 2013	0	1 (L)	0	1	0	65m north-east

Key:

Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

N.B. a full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.34 Great crested newts have been found in 28 of the 74 water bodies surveyed: there are nine medium population size classes and 19 small population size classes. In addition, 34 of the water bodies were found to contain other amphibians including smooth newt, palmate newt, common frog and common toad.

### *Desk study*

- 2.4.35 Warwickshire Biological Records Centre provided 231 amphibian records within 5km of the land required for the construction of the Proposed Scheme.
- 2.4.36 Sixty-one of the records lie within 1km of the land required for the construction of the Proposed Scheme.
- 2.4.37 Table 16 details the records of great crested newts and good or exceptional populations (where this data is provided) of other amphibians within 1km of the land required for the construction of the Proposed Scheme.

Table 16: Desk study records within 1km of the land required for the construction of the Proposed Scheme within CFA18

Number of records	Common name	Year of record	Distance (m) and orientation from Proposed Scheme	Nearest water body
1	Great Crested Newts	2005	960 north	320m from 030-AA-144009
1	Great Crested Newt	2005	880 north	250m from 143013
1	Great Crested Newt	2005	720 north	130m from 030-AA-143014

- 2.4.38 A review has been undertaken of developments within 1km of the Proposed Scheme in order to obtain any relevant amphibian survey information. Two developments have records of great crested newt surveys with results available. These results correspond to four water bodies, three of which have been surveyed to support the assessment (although incomplete). Table 17 details the records available from the development documents.

Table 17: Summary of amphibian survey results from other developments in CFA18

Committed Development Reference	Development description	Water body reference	Results including year of survey
W/12/0766	Outline Planning Application for the development/redevelopment and use of buildings at Stoneleigh Park to provide mixed use facilities including a science, business, technology and innovation park (Use Class B1a) and B1b) equine facilities and livestock and agricultural facilities, together with other ancillary uses and activities including retail, leisure and catering, and associated infrastructure, parking, servicing and landscaping (including off site highways infrastructure) which support the functioning of the Park and demolition of some buildings and infrastructure.	030-AA-138013	Three male and one female smooth newt, one female frog and six toads (2012)
W/12/0231	Erection of an equine well-being facility/livery yard (sui generis uses) to include two American stable barns, isolation stables, vets facility building, foaling unit building, lecture/mess room building, storage barn, five timber cabins to provide office, physiotherapy and cabin accommodation, horse exerciser, lunge ring, horse arena and other ancillary facilities.	030-AA-139002	Two male and one female great crested newts, seven male and three female smooth newts, one frog and one toad (2012)

Committed Development Reference	Development description	Water body reference	Results including year of survey
		030-AA-139005	One male great crested newt, seven male and three female smooth newts, three frogs and six toads (2012)
		030-AA-139007	Five frogs and 12 toads (2012)

### *Discussion of combined results*

- 2.4.39 Given the records provided from Warwickshire Biological Records Centre it appears that great crested newts are abundant within Warwickshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.40 LWS criteria for Warwickshire were reviewed to identify any sites that may qualify under the criteria. The criteria state that water bodies with breeding populations of internationally or nationally rare species would be selected as LWS. Within this area, 19 water bodies, as shown in Table 18, meet these criteria due to the presence of breeding great crested newts.

Table 18: Summary of those water bodies which meet the for Warwickshire LWS criteria in CFA18

Pond reference	Distance from Proposed Scheme (m) and orientation	Findings
030-AA-137001	12 west	Medium population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-137003	10 west	Medium population size class of great crested newt, smooth newt, palmate newt, common toad
030-AA-137009	180 south-west	Medium population size class of great crested newt, smooth newt, common frog, common toad
030-AA-139006	127 north-east	Small population size class of great crested newt, common toad
030-AA-140004	39 north-east	Medium population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-140005	30 north-east	Medium population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-140006	67 north-east	Medium population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-141002	Within land required	Medium population size class of great crested newt, smooth newt, palmate newt
030-AA-141011	259 north-east	Small population size class of great crested newt, smooth newt, palmate newt, common frog and common toad
030-AA-142003	222 north-east	Small population size class of great crested newt, common toad
030-AA-142004	45 west	Small population size class of great crested newt, smooth newt, palmate newt, common frog and common toad

Pond reference	Distance from Proposed Scheme (m) and orientation	Findings
030-AA-142005	323 north-east	Small population size class of great crested newt, smooth newt
030-AA-143002	33 north-east	Small population size class of great crested newt, smooth newt, palmate newt, common frog, common toad
030-AA-143003	126 south-west	Small population size class of great crested newt, smooth newt, palmate newt, frog, toad
030-AA-143004	176 south-west	Medium population size class of great crested newt, smooth newt, palmate newt, common frog, common toad
030-AA-145005	84 north-east	Small population size class of great crested newt, smooth newt, palmate newt
030-AA-145010	229 north-east	Medium population size class of great crested newt, smooth newt, common frog, common toad
030-AA-145015	113 south-west	Small population size class of great crested newt, smooth newt, palmate newt
040-AA-147008	173 north-east	Small population size class of great crested newt, smooth newt, common frog

2.4.41 Water bodies that are known to support great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations have been assigned from desk top study and aquatic survey results only, according to the methodology identified within the Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.

2.4.42 Within this area there are 13 assumed great crested newt metapopulations. Table 19 summarises these assumed great crested newt metapopulations and details the associated population size classes. The population size class has been estimated using the sum of the peak counts from all known great crested newt populations from a single nights survey visit within the assumed metapopulation.

Table 19: Summary of assumed great crested newt metapopulations in CFA18

Assumed metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme (m) and orientation
AMP8	South-east of Stoneleigh Park	030-AA-137001, 030-AA-137003, 030-AA-137008, 030-AA-137009, 030-AA-138002	Medium (peak count 70, made up of three medium, 29, 13, 18, and one small 10, population counts)	Within land required
AMP9	North-west of A46	030-AA-140003, 030-AA-140004, 030-AA-140005, 030-AA-140006, 030-AA-141010	Large (peak count 222, made up of three medium, 96, 64 and 62, population counts)	Within land required

Assumed metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme (m) and orientation
AMP10	South-east of A429	030-AA-141001, 030-AA-141002, 030-AA-141007, 030-AA-141009, 030-AA-142003, 030-AA-142005	Medium (peak count 17 made up of one medium, 12, and two small, 3 and 2, population counts)	Within land required
AMP11	North-west of A429	030-AA-142004, 030-AA-142010	Small (peak count 1)	Within land required
AMP12	East of Crackley wood	030-AA-143002, 030-AA-143003, 030-AA-143004, 030-AA-143005, 030-AA-143006	Medium (peak count 30, made up of one medium, 12, and two small, 10 and 8, population counts)	Within land required
AMP13	Between Blind lane and Crackley wood	030-AA-143009, 030-AA-144007	Small (peak count 2, made up of 2 small water bodies)	Within land required
AMP14	East of Broadwells wood	030-AA-144006, 030-AA-144002, 030-AA-144013, 030-AA-144008	Small (peak count 1)	Within land required
AMP15	West of Bockendon Road	030-AA-145010, 030-AA-145017, 030-AA-145014, 030-AA-145008	Medium (peak count 20, made up of one medium, 19 and one small, 1, population counts)	120m north
AMP16	South-east of Black Waste wood	030-AA-145005, 030-AA-145016, 030-AA-145023	Small (peak count 6)	Within land required
AMP17	Between Red Lane and the dismantled railway	030-AA-145013, 030-AA-145015	Small (peak count 9)	Within land required
AMP18	Burton Green	040-AA-146019, 040-AA-146020, 040-AA-146022, 040-AA-146023, 040-AA-146024	Small (peak count 1)	Within land required
AMP19	South of Beanit Spinney	040-AA-146011, 040-AA-146012, 040-AA-147009, 030-AA-147014, 040-AA-147003, 030-AA-147016, 030-AA-147018, 030-AA-147030, 030-AA-147031	Small (peak count 9, made up of 2 small, 8 and 1, population counts)	80m west
AMP20	Hodgett's Lane, Beechwood	040-AA-147008, 040-AA-147033, 040-AA-147004, 040-AA-147032, 040-AA-147006, 040-AA-147007, 040-AA-147026	Small (peak count 1)	Within land required

## CFA19 Coleshill Junction

### Scoping

#### 2.4.43

A total of 108 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme.



Of these 108 water bodies, 16 have been scoped out of further assessment due to distance from the Proposed Scheme and/or the presence of physical barriers between the water bodies and the Proposed Scheme. An additional 24 water bodies were scoped out following walkover surveys. The remaining 68 water bodies were scoped in for further assessment:

- 28 water bodies within the land required for construction of the Proposed Scheme;
- 25 water bodies between the land required for construction of the Proposed Scheme and 100m;
- 11 water bodies between 100m and 250m from the land required for construction of the Proposed Scheme; and
- four water bodies between 250m and 500m from the land required for construction of the Proposed Scheme

2.4.44 Table 20 below summarises the rationale for those ponds scoped into the assessment which are more than 250m from the Proposed Scheme.

Table 20: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA19

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>13</sup> (m) and orientation
030-AA-161004	North-east of M6 Toll	SP 19622 88259	Good habitat connectivity with limited habitat surrounding	259m east
030-AA-195008	South of Water Orton	SP 17855 89659	Potential habitat used is partially within land required	320m south
030-AA-195009	South of M42 and east of M6	SP 17845 89728	Potential habitat used is partially within land required	266m east
030-AA-209005	Water Orton	SP 17043 91042	Limited habitat near water body with suitable habitat within land required	269m north

### *Field survey*

#### **HSI/walkover**

2.4.45 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 24 water bodies were scoped out of further assessment, as shown in Table 21.

<sup>13</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Table 21: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA19

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>14</sup> (m) and orientation
030-AA-160003	South of M42	SP 19445 87097	Water body Flowing	Within land required
030-AA-160005	North of M42	SP 19559 87453	Dry	5m east
030-AA-160006	East of River Cole	SP 18857 87396	Dry	87m west
030-AA-161002	North of River Cole	SP 19130 88420	Dry	Within land required
030-AA-161007	South-west of M6 Toll	SP 19252 88745	Dry	71m east
030-AA-162008	East of River Cole	SP 19160 89030	Dry	2 east
030-AA-162010	South of Gilson	SP 19174 89636	Dry	27m east
030-AA-163001	Gilson	SP 19080 89897	Dry	Within land required
030-AA-164001	Coleshill Sewage Treatment Works	SP 19429 91241	Not present	72m east
030-AA-163005	East of M6, West of Coleshill Estate	SP 18256 89066	Not present	57m west
030-AA-163011	Residential garden, Chattle Hill, east of Lichfield road	SP 19279 90622	Not present	85m east
030-AA-164002	Coleshill	SP 19584 91447	Dry	261m east
030-AA-164023	Coleshill Sewage Treatment Works	SP 19581 91129	Concrete sided tank, not suitable for amphibians and could not be accessed for survey	24m east
030-AA-164024	Coleshill Sewage Treatment Works	SP 19436 91225	Concrete sided tank not suitable for amphibians and could not be accessed for survey	61 east
030-AA-195005	South of Water Orton	SP 18250 90186	Not present	Within land required
030-AA-195013	In-between M6 and M42, north of Coleshill Estate	SP 18425 89699	Not present	Within land required
030-AA-195014	West of M6 toll and south of M42	SP 18294 89672	Dry	34m east

<sup>14</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>14</sup> (m) and orientation
030-AA-195016	In-between M6 and M42, north-west of Coleshill Estate	SP 18197 89470	Not present	142m south-west
030-AA-210011	North-west of M42, south of Vicarage Lane, Water Orton	SP 18300 90349	Dry ditch	Within land required
030-AA-164027	Coleshill sewage treatment works	SP 19595 91156	Active filter beds, not suitable for amphibian surveys	54m east
030-AA-164028	Coleshill sewage treatment works	SP 19493 91205	Active filter beds, not suitable for amphibian surveys	69m east
030-AA-164029	Coleshill sewage treatment works	SP 19527 91271	Active filter beds, not suitable for amphibian surveys	143m east
030-AA-164031	Coleshill sewage treatment works	SP 19284 91295	Active filter beds, not suitable for amphibian surveys	45m east
030-AA-211006	East of M42	SP 18742 91699	Dry	143m west

### Presence/absence and population size class estimate surveys

- 2.4.46 Presence/absence surveys were started on 57 water bodies within the Coleshill Junction area.
- 2.4.47 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present
- 2.4.48 The results of surveys for presence/absence and population size class assessment are detailed within Table 22.

Table 22: Summary of results from amphibian presence/absence and population size class estimate surveys in CFA19

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/incomplete/scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-160001	South-west of Coleshill	SP 19485 87722	P/A	4	18 June 2013	27 June 2013	0	0	0	1	1 (L)	10m east
030-AA-160002	West of M6 toll and north-east of Chelmsley Wood	SP 19527 87691	P/A	4	18 June 2013	27 June 2013	0	0	0	2	1 (L)	Within land required
030-AA-160004	East of River Cole	SP 19339 87619	P/A	2	13 June 2013	18 June 2013	0	0	0	1	0	Within land required
030-AA-160007	North Chelmsley Wood	SP 18907 87632	P/A	4	09 May 2013	03 June 2013	0	0	0	2	0	10m west
030-AA-161003	South-west of M6 Toll	SP 19304 88148	P/A	4	09 May 2013	03 June 2013	0	0	0	2	0	30m east
030-AA-161004	North-east of M6 Toll	SP 19622 88259	P/A	4	30 April 2013	29 May 2013	0	0	0	4	2 (L)	230m east
030-AA-161005	West of M42, south-west of Coleshill	SP 18466 88401	P/A	4	12 June 2013	24 June 2013	14 (M)	5 (L)	0	3	1 (L)	420m south-west
030-AA-161006	North of Birmingham Road	SP 18557 88451	P/A	4	30 April 2013	29 May 2013	0	0	0	1	0	180m west
030-AA-161008	South-west of River Cole	SP 18875 88172	P/A	4	30 April 2013	29 May 2013	0	0	0	1	0	130m west

<sup>15</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/ incomplete/ scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-161012	West of M42, just north of Birmingham Road, B4114	SP 18580 88426	P/A	4	30 April 2013	29 May 2013	0	0	0	1	0	320m south-west
030-AA-161013	West of M42, just south of Birmingham Road, B4114	SP 18513 88544	P/A	4	30 April 2013	29 May 2013	0	0	0	1	1 (L)	270m south-west
030-AA-161014	North of Birmingham Road	SP 18495 88662	P/A	4	30 April 2013	29 May 2013	0	1 (L)	0	1	1 (L)	220m west
030-AA-162002	East of Gilson	SP 19353 89756	P/A	4	18 April 2013	23 May 2013	0	0	0	3	1 (L)	100m east
030-AA-162009	South-west Coleshill	SP 19380 89168	P/A	2	07 May 2013	29 May 2013	0	0	0	1	0	190m east
030-AA-162011	Gilson	SP 19034 89753	P/A	4	18 April 2013	23 May 2013	0	1 (L)	0	0	0	50m north-east
030-AA-162012	Gilson	SP 19505 89745	P/A	3	18 April 2013	23 May 2013	0	0	0	3	2 (L)	220m east
030-AA-163003	North of Gilson	SP 18851 90270	P/A	4	24 May 2013	14 April 2013	0	12 (G)	0	2	0	30m west
030-AA-163006	Gilson	SP 18822 90546	P/A	1	18 April 2013	23 May 2013	0	1 (L)	0	1	2 (L)	20m west
030-AA-163007	North of Gilson	SP 18860 90246	P/A	4	18 April 2013	18 April 2013	0	0	0	0	0	20m west
030-AA-163008	North of Gilson	SP 18869 90256	PCS	6	18 April 2013	23 May 2013	0	1 (L)	0	15	0	30m west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/ incomplete/ scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-163009	North of Gilson	SP 18777 90178	P/A	4	18 April 2013	05 June 2013	6 (S)	27 (G)	0	3	0	60m west
030-AA-163010	North of Gilson	SP 19416 89941	P/A	2	18 April 2013	23 May 2013	0	0	0	0	0	110m east
030-AA-195001	South of M42	SP 18395 89766	P/A	4	23 April 2013	10 June 2013	6 (S)	4 (L)	0	1	1 (L)	Within land required
030-AA-195002	South of M42	SP 18660 89744	P/A	4	23 April 2013	21 May 2013	0	0	0	2	1 (L)	50m north
030-AA-195003	South of M42	SP 18326 89657	P/A	4	23 April 2013	21 May 2013	0	1 (L)	0	1	1 (L)	Within land required
030-AA-195004	The belt, south of M42	SP 18311 89650	P/A	4	23 April 2013	21 May 2013	0	1 (L)	0	0	0	Within land required
030-AA-195006	North of M42	SP 18249 90203	P/A	3	18 April 2013	22 May 2013	1 (S)	1 (L)	0	0	0	80m north
030-AA-195007	South of Water Orton	SP 18068 90189	PCS	6	18 April 2013	22 May 2013	0	0	0	0	0	Within land required
030-AA-195008	South of Water Orton	SP 17854 89659	P/A	5	23 April 2013	21 May 2013	0	1 (L)	0	0	0	320m east
030-AA-195009	South of M42 and E of M6	SP 17845 89728	P/A	1	23 April 2013	21 May 2013	6 (S)	8 (L)	0	1	0	240m east
030-AA-195011	West of M6 toll and south of M42	SP 18276 89644	P/A	4	13 May 2013	10 June 2013	0	0	0	1	1 (L)	Within land required
030-AA-195012	West of M6 toll and south of M42	SP 18233 89474	P/A	4	14 May 2013	10 June 2013	0	0	0	1	1 (L)	Within land required

## Appendix EC-002-003 | Amphibians

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/incomplete/scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-195015	West of M6 toll and south of M42	SP 18716 89707	P/A	3	14 May 2013	11 June 2013	0	0	0	0	1 (L)	50m east
030-AA-195017	West of M6 toll and South of M42	SP 18281 89731	P/A	3	13 May 2013	30 May 2013	0	0	0	0	0	Within land required
030-AA-195018	West of M6 toll and South of M42	SP 18322 89714	P/A	3	01 May 2013	10 June 2013	1 (S)	1 (L)	0	1	1 (L)	10m east
030-AA-195019	West of M6 toll and South of M42	SP 18208 89663	P/A	3	01 May 2013	10 June 2013	3 (S)	1 (L)	1 (L)	0	0	40m east
030-AA-209001	South of Water Orton	SP 17749 90461	PCS	6	08 May 2013	28 May 2013	0	0	0	0	0	Within land required
030-AA-209002	South of Water Orton	SP 17885 90352	PCS	6	23 April 2013	21 May 2013	0	0	0	0	0	Within land required
030-AA-209006	South-west of Water Orton	SP 17517 90621	PCS	6	08 May 2013	28 May 2013	5 (S)	4 (L)	0	4	0	60m north
030-AA-209007	South-west of Water Orton	SP 17424 90424	PCS	6	04 June 2013	18 June 2013	0	0	0	0	0	Within land required
030-AA-209008	South-west of Water Orton	SP 17294 90673	PCS	6	13 June 2013	26 June 2013	0	0	0	0	0	Within land required
030-AA-209009	South-west of Water Orton	SP 17435 90708	P/A	4	13 June 2013	26 June 2013	0	0	0	2	0	Within land required
030-AA-209010	South-west of Water Orton	SP 17906 90489	P/A	4	20 June 2013	26 June 2013	0	1 (L)	0	1	2 (L)	10m north
030-AA-209011	South of Water Orton	SP 17946 90483	P/A	4	20 June 2013	26 June 2013	1 (S)	5 (L)	0	0	0	Within land required

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/ incomplete/ scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-209012	South of Water Orton	SP 17412 90778	P/A	2	13 June 2013	26 June 2013	0	0	0	1	0	130m north
030-AA-210001	South of Water Orton	SP 18319 90460	P/A	2	18 April 2013	22 May 2013	3 (S)	0	0	0	0	Within land required
030-AA-210002	South of Water Orton	SP 18443 90604	P/A	4	18 April 2013	28 May 2013	1 (S)	0	0	2	1 (L)	Within land required
030-AA-210003	South of Water Orton	SP 18034 90509	P/A	4	18 April 2013	28 May 2013	8 (S)	1 (L)	0	0	0	Within land required
030-AA-210004	South of Water Orton	SP 18180 90585	PCS	6	18 April 2013	05 June 2013	9 (S)	11 (G)	0	2	31 (L)	Within land required
030-AA-210005	South of Water Orton	SP 18473 90561	P/A	4	18 April 2013	22 May 2013	1 (S)	1 (L)	0	0	0	Within land required
030-AA-210008	South of Water Orton	SP 18210 90361	P/A	4	18 April 2013	05 June 2013	1 (S)	13 (G)	0	3	1 (L)	Within land required
030-AA-210009	South of Water Orton	SP 18265 90643	P/A	4	18 June 2013	26 June 2013	1 (S)	1 (L)	0	1	1 (L)	Within land required
030-AA-210010	South of Water Orton	SP 18341 90560	P/A	4	23 April 2013	21 May 2013	0	0	0	4	0	60m north-west
030-AA-210013	South of Water Orton	SP 18550 90337	P/A	2	18 April 2013	22 May 2013	0	0	0	1	2 (L)	Within land required
030-AA-211007	East of Water Orton	SP 18899 90984	P/A	4	17 June 2013	26 June 2013	0	0	0	0	0	50m south
030-AA-211009	North-east of Water Orton	SP 18847 91598	P/A	3	22 April 2013	20 May 2013	0	1 (L)	0	0	0	60m east



## Appendix EC-002-003 | Amphibians

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed (complete/ incomplete/ scoped out)	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the land required for the construction of the Proposed Scheme <sup>15</sup> (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-211010	North-east of Water Orton	SP 18951 91459	P/A	4	22 April 2013	20 May 2013	0	12 (G)	0	1	7 (L)	Within land required

Key:

Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

N.B. a full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.49 Great crested newts have been found in 16 of the 57 water bodies surveyed, there are 15 water bodies which have a small population size class and one which has a medium population size class. In addition 33 water bodies were found to contain other species of amphibians including smooth newt, palmate newt, common frog and common toad.

#### *Desk study*

- 2.4.50 Warwickshire Biological Records Centre provided 230 amphibian records within 5km of the land required for the construction of the Proposed Scheme within the study area.
- 2.4.51 All records either lie over 1km from the land required for the construction of the Proposed Scheme or are records of amphibian species, excluding great crested newts, which are not exceptional populations and are therefore not detailed.
- 2.4.52 A review has been undertaken of developments within 1km of the land required for construction of the Proposed Scheme for results from other amphibian surveys. None of the developments reviewed within 1km detail results of amphibian surveys.

#### *Discussion of combined results*

- 2.4.53 Given the records provided from Warwickshire Biological Records Centre it appears that great crested newts are abundant within Warwickshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.54 Local Wildlife Site (LWS) criteria for Warwickshire were reviewed to identify any sites that meet the criteria. The criteria state that water bodies with breeding populations of internationally or nationally rare species would be selected as LWS. Within this, four water bodies meet the criteria due to the presence of confirmed breeding great crested newts.
- 2.4.55 Water bodies that are known to support great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations have been assigned from desk top study only according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.
- 2.4.56 Within the Coleshill Junction area there are six assumed great crested newt metapopulations. Table 23 summarises these assumed great crested newt metapopulations and details the associated population size classes. The population size class has been estimated using the sum of the peak counts from all great crested newt populations from a single nights survey visit within the assumed metapopulation.

Table 23: Summary of assumed great crested newt metapopulations within CFA19

Assumed metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme <sup>16</sup> (m) and orientation
AMP21	North of Birmingham Road	030-AA-161005, 030-AA-161012, 030-AA-161006, 030-AA-161013, 030-AA-161014, 030-AA-161011	Medium (peak count 14 recorded in one water body )	Within land required
AMP22	West of M6 toll and S of M42	030-AA-195011, 030-AA-195002, 030-AA-195001030-AA-195018, 030-AA-195017,030-AA-195003, 030-AA-195019, 030-AA-195015, 030-AA-195012	Small (peak count 10)	Within land required
AMP23	North of Gilson	030-AA-163004, 030-AA-163003, 030-AA-163009, 030-AA-163007, 030-AA-163008	Small (peak count 6)	Within land required
AMP24	South of Water Orton	030-AA-195006, 030-AA-195007, 030-AA-209001, 030-AA-209002, 030-AA-209010, 030-AA-209011, 030-AA-210001, 030-AA-210002, 030-AA-210003, 030-AA-210004, 030-AA-210005,030-AA-210006, 030-AA-210007, 030-AA-210008, 030-AA-210009, 030-AA-210010, 030-AA-210013	Medium (peak count 26, made up of small populations in multiple water bodies)	Within land required
AMP33	South-west of Water Orton	030-AA-209006, 030-AA-209009, 030-AA-209008, 030-AA-209007, 030-AA-209012	Small (peak count 5)	Within land required
AMP34	South of M42 and East of M6	030-AA-195008, 030-AA-195009, 030-AA-195010	Small (peak count 6)	Within land required

## CFA20 Curdworth to Middleton

### Scoping

2.4.57 A total of 184 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 184 water bodies, 40 have been scoped out of further assessment due to distance from the Proposed Scheme or the presence of physical barriers between the water bodies and the Proposed Scheme. Of the remaining 144 water bodies, a further 33 were scoped out following walkover surveys. The remaining 111 water bodies were scoped in for further assessment:

- 17 water bodies within the land required for construction of the Proposed Scheme;
- 44 water bodies between the land required for construction of the Proposed Scheme and 100m;

<sup>16</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

- 36 water bodies between 100m and 250m from the land required for construction of the Proposed Scheme; and
- 14 water bodies between 250m and 500m from the land required for construction of the Proposed Scheme.

2.4.58 Table 24 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the land required for construction of the Proposed Scheme.

Table 24: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA20

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>17</sup> (m) and orientation
030-AA-164002	Coleshill	SP 19584 91447	Good connectivity to the land required and limited habitat surrounding	261m east
030-AA-166002	South of Dunton	SP 19696 93353	Good connectivity to the land required	266m east
030-AA-167018	Lea Marston Golf course	SP 19942 94031	Good connectivity to land required with limited suitable habitat near	381m east
030-AA-167019	Lea Marston golf course	SP 19909 94150	Good connectivity to land required with limited suitable habitat near	262m east
030-AA-167026	Lea Marston golf course	SP 19782 94086	Good connectivity to land required with limited suitable habitat near	252m east
030-AA-168028	North of A4097, west of Marston	SP 20986 95013	Good connectivity to the land required, barrier preventing movement in opposite direction	395m east
030-AA-169004	South of Bodymoor Heath	SP 19695 96121	Good habitat connectivity to land required with limited habitat near	321m east
030-AA-169012	Bodymoor Heath	SP 19612 97035	Good habitat connectivity to land required with limited habitat near	364m east
030-AA-170012	West of Middleton, west of A4091	SP 19056 97805	Suitable habitat partly within land required	288m north-east
030-AA-170015	East of Hunts Green, north-west of Bodymoor Heath	SP 19486 97104	Good habitat connectivity to land required with limited habitat near	267m east
030-AA-170019	North-east of Coneybury Woods	SP 19352 97518	Good connectivity to the land required	495m north-east
030-AA-171026	South-east of Middleton	SP 18043 97893	Good habitat connectivity to land required, with suitable habitat partly within	258m south-west

<sup>17</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>17</sup> (m) and orientation
030-AA-172011	North-west of Middleton park	SP 17611 98783	Good habitat connectivity with limited habitat near	296m north-east
030-AA-173002	North-west Marl Pit	SP 17253 99406	Good connectivity to the land required	328m south-west

### Field survey

#### HSI/walkover

2.4.59 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 33 water bodies were scoped out of further assessment, as shown in Table 25.

Table 25: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA20

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>18</sup> (m) and orientation
030-AA-164019	North-west of Coleshill	SP 19470 91667	Not present	202m east
030-AA-164025	Coleshill	SP 19391 91595	Water body dry	95m east
030-AA-164026	North-west of Coleshill	SP 19256 91511	Water body dry	Within land required
030-AA-165012	Coleshill	SP 19568 92407	Dry ditch	Within land required
030-AA-166003	North-west of Birch Wood	SP 19657 92991	Dry ditch	Within land required
030-AA-166006	North of Curdworth	SP 18389 93684	Canal	228m west
030-AA-166011	North-west of M42	SP 18713 93941	Canal	21m west
030-AA-167003	North-west of M42	SP 18868 94112	Canal	22m west
030-AA-167004	North-west of M42	SP 18940 94193	Canal	17m west
030-AA-167005	Marston Lane Bridge	SP 18960 94225	Flowing water body	22m west
030-AA-167006	Marston Lane Bridge	SP 19009 94272	Canal	Within land required
030-AA-167007	Marston Lane Bridge	SP 19035 94311	Flowing outflow from Canal	Within land required

<sup>18</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>18</sup> (m) and orientation
030-AA-167008	Marston Lane Bridge	SP 19089 94385	Canal	13m west
030-AA-167011	Marston Lane Bridge	SP 19124 94466	Canal	17m west
030-AA-167012	North of M42 J9, west of Marston	SP 19141 94514	Flowing outflow from Canal	8m west
030-AA-167013	North of Marston Lane Bridge	SP 19208 94637	canal	Within land required
030-AA-167014	North of Marston Lane Bridge	SP 19252 94743	Flowing outflow from Canal	1m west
030-AA-167015	North of Marston Lane Bridge	SP 19376 94983	Canal	102m east
030-AA-167029	Marston Lane Bridge	SP 19067 94346	Flowing outflow from Canal	9m west
030-AA-167033	Dunton Wood	SP 19568 94006	Dry	88m each
030-AA-168004	Marston field bridge	SP 19474 95200	Flowing outflow from Canal	35m east
030-AA-168008	North-east of Marston Field Bridge	SP 19378 95027	Flowing water body	109m north-east
030-AA-168014	South of Bodymoor heath	SP 19616 95449	Not present	193m east
030-AA-168015	South of Bodymoor heath	SP 19639 95535	Flowing section of Canal	235m north-east
030-AA-168020	North of M42, J9 and east of Marston	SP 18934 95054	Not present	52m west
030-AA-168021	North-west of Marston Lane Bridge	SP 18904 94991	Dry	18m west
030-AA-168022	North of M42, J9 and east of Marston	SP 18948 95004	Not present	50m west
030-AA-169008	East of Middleton Golf Course	SP 18734 96111	Flowing water body	5m north-east
030-AA-170027	South of Coneybury Woods	SP 18922 97114	Large quarry	Within land required
030-AA-170028	South of Coneybury Woods	SP 18810 97436	Dry	Within land required
030-AA-170030	South of Coneybury Woods	SP 18948 97338	Dry ditch	58m north-east
030-AA-171014	East of Middleton	SP 19179 98421	Flowing water body	395m east
030-AA-171024	Middleton Park	SP 18659 98073	Not present	3m east

*Presence/absence and population size class estimate surveys*

- 2.4.60 Presence/absence surveys were started on 56 water bodies within the area. However, eight of these were scoped out during the presence/absence surveys due to the water bodies drying out during the survey period.
- 2.4.61 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present. The results of surveys for presence/absence and population size class assessment are detailed within Table 26.

Table 26: Summary of results from amphibian presence/absence and population size class estimate surveys within CFA20

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-164002	Coleshill	SP 19585 91448	P/A	2	09 May 2013	20 May 2013	0	0	0	0	0	261m east
030-AA-164003	Coleshill	SP 19257 91511	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-164009	Coleshill	SP 19350 91725	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	132m east
030-AA-164017	North-west Coleshill	SP 19134 91823	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-164032	North-west Coleshill	SK 91646 91646	P/A	3	22 April 2013	20 May 2013	0	0	0	0	0	90m east
030-AA-164033	North-west Coleshill	SK 91621 91621	P/A	2	09 May 2013	20 May 2013	0	0	0	0	0	83m east
030-AA-165002	North-west Coleshill	SP 19035 91907	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-165009	South-east Birch Wood	SP 19748 92345	P/A	4	22 April 2013	20 May 2013	0	1 (L)	0	0	0	103m east
030-AA-165010	Birch Wood	SP 19617 92574	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-165011	North-west Coleshill	SP 19254 92000	P/A	4	20 May 2013	03 June 2013	0	7 (L)	0	0	0	Within land required
030-AA-166001	East of M42	SP 19025 93576	P/A	4	06 June 2013	17 June 2013	15 (M)	16 (G)	0	0	0	18m west
030-AA-167001	South-west Marston Field Bridge	SP 19182 94883	P/A	4	23 April 2013	21 May 2013	0	10 (G)	0	0	0	Within land required



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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-167002	West of Dunton Wood	SP 19357 93957	P/A	4	22 May 2013	29 May 2013	0	0	0	0	5 (L)	Within land required
030-AA-167009	North of M42 J9, west of Marston	SP 19129 94424	P/A	4	01 May 2013	22 May 2013	0	0	0	0	2 (L)	26m west
030-AA-167016	Dunton Wood	SP 19452 93934	P/A	4	06 June 2013	17 June 2013	0	2 (L)	0	1	1 (L)	19m west
030-AA-167017	Dunton Wood	SP 19666 94046	P/A	4	06 June 2013	17 June 2013	0	1 (L)	0	1	0	147m west
030-AA-167020	North-east Dunton Wood	SP 19689 94174	P/A	4	06/0/13	17 June 2013	0	1 (L)	0	0	1 (L)	147m east
030-AA-167021	North-east Dunton Wood	SP 19667 94216	P/A	4	06 June 2013	17 June 2013	0	0	0	0	0	104m east
030-AA-167027	North Marston Field Bridge	SP 19193 94849	P/A	4	23 April 2013	21 May 2013	0	6 (L)	0	0	0	Within land required
030-AA-167028	North Marston Field Bridge	SP 19198 94597	P/A	2	20 June 2013	24 June 2013	0	0	0	0	0	Within land required
030-AA-167030	Marston Field Bridge	SP 19126 94412	P/A	2	23 April 2013	01 May 2013	0	0	0	0	0	24m west
030-AA-168001	North Marston Field Bridge	SP 19091 94994	P/A	4	23 April 2013	21 May 2013	0	3 (L)	0	3	26 (L)	20m west
030-AA-168002a	North Marston Field Bridge	SP 19008 95072	P/A	4	17 June 2013	27 June 2013	0	0	0	0	0	63m west
030-AA-168002b	North Marston Field Bridge	SP 19008 95072	P/A	4	17 June 2013	27 June 2013	0	0	0	0	2 (L)	65m west
030-AA-168016	West of The Belfry, north of M42 J9	SP 18896 95082	P/A	4	23 April 2013	21 May 2013	0	0	0	1	1 (L)	4m west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-168018	West of The Belfry, north of M42 J9	SP 18951 94963	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	14m west
030-AA-168019	West of The Belfry, north of M42 J9	SP 18917 95027	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	50m west
030-AA-168023	West of The Belfry, north of M42 J9	SP 18953 95000	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	48m west
030-AA-168024	North Marston Field Bridge	SP 18892 95003	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	23m west
030-AA-168025	West of The Belfry, north of M42 J9	SP 18972 95002	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	59m west
030-AA-170002	South of Coneybury Wood	SP 18973 97384	P/A	4	22 April 2013	20 May 2013	0	0	0	0	1 (L)	94m east
030-AA-170003	South of Coneybury Wood	SP 19021 97401	P/A	4	22 April 2013	20 May 2013	0	4 (L)	0	2	2 (L)	145m east
030-AA-170004	North-east of Coneybury Wood	SP 18998 97462	P/A	4	22 April 2013	20 May 2013	0	0	0	2	0	142m east
030-AA-170007	South-east of Middleton, west of A4091	SP 18543 97523	P/A	4	22 April 2013	23 May 2013	0	0	0	0	0	59m south-west
030-AA-170009	South of Coneybury Wood	SP 18906 97639	P/A	4	08 May 2013	23 May 2013	0	1 (L)	0	0	0	101m north-east
030-AA-170011	North-east of Coneybury Wood	SP 18919 97678	P/A	4	22 April 2013	20 May 2013	0	3 (L)	0	0	2 (L)	123m north-east
030-AA-170012	West of Middleton, west of A4091	SP 19057 97806	P/A	4	22 April 2013	20 May 2013	0	75 (G)	0	1	0	288m north-east
030-AA-170013	Middleton Park	SP 18861 97829	P/A	4	22 April 2013	20 May 2013	0	0	0	2	0	109m north-east

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-170019	East Middleton Park	SP 19352 97518	P/A	4	22 April 2013	20 May 2013	0	0	0	1	0	495m north-east
030-AA-170029	East of Hunts Green, south of Middleton	SP 18871 97533	P/A	4	18 April 2013	20 May 2013	0	3 (L)	0	0	0	41m east
030-AA-170034	South Middleton Park	SP 18865 97536	P/A	4	18 April 2013	23 May 2013	0	0	0	0	0	37m east
030-AA-170035	Coneybury Wood	SK 97414 97414	P/A	4	20 May 2013	05 June 2013	0	11	0	1	0	200m east
030-AA-170036	South Middleton Park	SK 97626 97626	P/A	4	16 May 2013	05 June 2013	0	2 (L)	0	0	1 (L)	150m east
030-AA-171001	North-west of Pool Head Plantation, east of sewage works	SP 18649 98215	P/A	4	22 May 2013	11 June 2013	0	1 (L)	0	1	4 (L)	85m north-east
030-AA-171002	Middleton	SP 18192 98111	P/A	4	16 April 2013	14 May 2013	0	4 (L)	0	1	0	37m south-west
030-AA-171003	Middleton Park	SP 19054 98255	P/A	4	17 June 2013	27 June 2013	1 (S)	2 (L)	0	1	1 (L)	239m east
030-AA-171021	Middleton	SP 18089 98074	P/A	4	17 June 2013	27 June 2013	0	0	0	1	0	145m west
030-AA-171022	North Middleton Park	SP 18738 98730	PCS	6	22 May 2013	19 June 2013	2 (S)	0	0	0	0	208m north-east
030-AA-171025	Middleton	SP 18231 98146	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	Within land required
030-AA-171026	South-east Middleton	SP 18146 97875	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	258m south-west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-171027	Middleton	SP 18205 98048	P/A	4	22 May 2013	11 June 2013	0	0	0	1	0	43m west
030-AA-172002	South of Birmingham and Fazeley Canal	SP 18487 98875	PCS	6	22 May 2013	19 June 2013	7 (S)	10 (G)	0	0	2 (L)	132m north-east
030-AA-172011	North-west Middleton Park	SP 18060 99392	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	296m north-east
030-AA-173001	North-east of Marl Pit	SP 17411 99406	P/A	4	16 April 2013	14 May 2013	0	0	0	6	1 (L)	214m south-west
030-AA-173002	North-west Marl Pit	SP 17254 99407	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	328m south-west
030-AA-173003	North-west Marl Pit	SP 17436 99527	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	114m south-west

Key:

Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E);
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

N.B. a full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.62 Great crested newts have been found in four of the 56 water bodies surveyed: one medium population size class and three small population size classes. In addition 28 of the water bodies were found to contain other amphibians including smooth newt, common frog and common toad.

### *Desk study*

- 2.4.63 Warwickshire Biological Record Centre provided 67 amphibian records within 5km of the land required for the construction of the Proposed Scheme.
- 2.4.64 Twenty one record lie within 1km of the land required for the construction of the Proposed Scheme. The remaining records lie outside of 1km.
- 2.4.65 Table 27 details the records of great crested newts and good or exceptional populations (where this data is provided) of other amphibians within 1km of the land required for the construction of the Proposed Scheme

Table 27: Selected desk study records within 1km of the land required for construction of the Proposed Scheme in CFA20

Number of records	Common name	Peak count	Year of record	Distance (m) and orientation from Proposed Scheme	Nearest water body
1	Great crested newt	1	1996	400m south-east	440m from 030-AA-166004
1	Great crested newt	2	2000	400m south-east	440m from 030-AA-166004
1	Great crested newt	1	2000	400m south-east	440m from 030-AA-166004

- 2.4.66 A review has been undertaken of developments within 1km of the Proposed Scheme. There are no developments within 1km of the Land required for the Proposed Scheme within CFA20.

### *Discussion of combined results*

- 2.4.67 Given the records provided from Warwickshire Biological Records Centre it appears that great crested newts are abundant within Warwickshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.68 LWS criteria for Warwickshire were reviewed to identify any sites that may qualify under the criteria. The criteria state that water bodies with breeding populations of internationally or nationally rare species would be selected as LWS. Within this area, one water body (030-AA-172002) may qualify as LWS due to the presence of a small population of breeding great crested newt. This water body is located 160m from the land required for construction of the Proposed Scheme.
- 2.4.69 Water bodies with known presence of great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations have been assigned from desk top study and aquatic survey results only, according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.
- 2.4.70 Within this area there are no assumed great crested newt metapopulations.

## CFA21 Drayton Bassett, Hints and Weeford

### Scoping

2.4.71 A total of 116 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 116 water bodies, 28 were scoped out of further assessment due to distance from the Proposed Scheme or the presence of physical barriers between the water bodies and the Proposed Scheme. Of the remaining 88 water bodies, a further 15 were scoped out following walkover surveys. The remaining 73 water bodies were scoped in for further assessment:

- 19 water bodies within the land required for the construction of the Proposed Scheme;
- 28 water bodies between the land required for the construction of the Proposed Scheme and 100m;
- 18 water bodies between 100m and 250m from the land required for the construction of the Proposed Scheme; and
- eight water bodies between 250m and 500m from the land required for the construction of the Proposed Scheme.

2.4.72 Table 28 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the land required for construction of the Proposed Scheme.

Table 28: Summary of those water bodies located more than 250m from the land required for construction of the Proposed Scheme scoped into amphibian assessment within CFA21

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>19</sup> (m) and orientation
030-AA-172009	West of Middleton Park	SP 18698 99082	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	395m north-east
030-AA-174008	South of Sutton Road	SK 17288 00900	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	350m north-east
030-AA-174009	South of Sutton Road	SK 17219 00964	Good habitat connectivity to Proposed Scheme	277m north-east
030-AA-174016	South of Oakleigh	SK 17393 00697	Good habitat connectivity to Proposed Scheme	273m north-east
030-AA-176010	Hints	SK 15869 03010	Good habitat connectivity to Proposed Scheme	407m north-east
030-AA-179002	South-west of Packington Moor	SK 14330 05633	Good habitat connectivity to Proposed Scheme	300m west

<sup>19</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	Distance from the land required for the construction of the Proposed Scheme <sup>19</sup> (m) and orientation
030-AA-180007	East of Packington Moor	SK 15158 05895	Minor barrier away from the land required for the construction of the Proposed Scheme, no significant habitat around	352m east
030-AA-180008	South-west of Packington Moor	SK 14315 05770	Good habitat connectivity to Proposed Scheme	291m west

### Field survey

#### HSI/walkover

2.4.73 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 15 water bodies were scoped out of further assessment, as shown in Table 29.

Table 29: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA21

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>20</sup> (m) and orientation
030-AA-173014	North of Drayton Lane	SK 17709 00459	Suitable habitat near to water body with limited links to Proposed Scheme	418m east
030-AA-173018	East of Sutton Road (A453)	SK 17799 00425	Suitable habitat near to water body with limited links to Proposed Scheme	416m east
030-AA-174010	South of Sutton Road	SK 17315 01175	Dry	167m north-east
030-AA-174017	South-west of Oakleigh	SK17072 00578	Dry	4m east
030-AA-174018	South of Sutton Road	SK 17214 00794	Dry	261m north-east
030-AA-177001	South of Brockhurst Lane (known locally as Rookery Lane), south-west of Hints	SK 15505 02864	Temporary floodplain	30m east
030-AA-177003	South of Brockhurst Lane (known locally as Rookery Lane), south-west of Hints	SK 15539 02875	Not present	61m east
030-AA-177005	West of Bourne Brook and Bourne Cut Corridor	SK 15480 02904	Dry	8m east
030-AA-177006	West of Bourne Brook and Bourne Cut Corridor	SK 15020 02751	Dry	Within land required

<sup>20</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>20</sup> (m) and orientation
030-AA-178010	North of A5, north-east of Weeford	SK 14823 04137	Dry	Within land required
030-AA-178019	South-west of Packington Moor	SK 15314 03781	Dry	22m east
030-AA-179001	South-west of Packington Moor	SK 14418 05540	Dry	174m west
030-AA-179010	South-west of Packington Moor	SK 14481 05413	Flowing water body	33m west
030-AA-180005	South-west of Packington Moor	SK 14397 06661	Dry	284m west
030-AA-180006	West of Packington Moor	SK 14213 05792	Flowing water body	329m west

### *Presence/absence and population size class estimate surveys*

- 2.4.74 Presence/absence surveys were undertaken at 36 water bodies within the area. However seven of these were scoped out during the presence/absence surveys due to the water bodies drying out during the survey period.
- 2.4.75 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present.
- 2.4.76 The results of surveys for presence/absence and population size class assessment are detailed within Table 30.



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Table 30: Summary of results from amphibian presence/absence and population size class estimate surveys within CFA21

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-172001	South of Birmingham and Fazeley Canal	SP 17799 99219	PCS	6	22 May 2013	13 June 2013	11 (M)	3 (L)	0	2	0	Within land required
030-AA-172003	South of Birmingham and Fazeley Canal	SP 18238 99375	PCS	6	22 May 2013	27 June 2013	1 (S)	1 (L)	0	2	3 (L)	242m north-east
030-AA-172004	South of Birmingham and Fazeley Canal	SP 17868 99318	P/A	3	12 June 2013	19 June 2013	3 (S)	2 (L)	0	0	0	Within land required
030-AA-172005	South of Birmingham and Fazeley Canal	SP 17791 99257	P/A	3	12 June 2013	19 June 2013	0	0	0	0	0	Within land required
030-AA-172006	South of Birmingham and Fazeley Canal	SP 17817 99214	P/A	3	12 June 2013	19 June 2013	2 (S)	0	0	0	1 (L)	Within land required
030-AA-172007	East of Marl Pit	SP 17814 99259	PCS	6	22 May 2013	13 June 2013	7 (S)	7 (L)	0	0	0	Within land required
030-AA-172010	South of Birmingham and Fazeley Canal	SP 18444 99044	PCS	6	22 May 2013	13 June 2013	1 (S)	18 (G)	0	1	1 (L)	173m north-east
030-AA-172015	North-east of Bangley Wood	SP 18058 99392	PCS	6	30 May 2013	19 June 2013	7 (S)	3 (L)	0	1	0	112m north-east
030-AA-174001	North-east of Bangley Wood	SK 16968 00389	P/A	4	24 April 2013	22 May 2013	0	0	0	1	14 (L)	Within land required
030-AA-174002	North of Bangley Wood	SK 16851 00708	P/A	4	16 April 2013	14 May 2013	0	0	0	1	7 (L)	Within land required
030-AA-174003	South of Sutton Road	SK 16296 00682	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	233m south-west
030-AA-174008	South of Sutton Road	SK 17288 00900	P/A	4	16 April 2013	14 May 2013	3 (S)	0	0	0	1 (L)	350m north-east

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-174009	South of Sutton Road	SK 17219 00964	P/A	4	16 April 2013	14 May 2013	8 (S)	1 (L)	1 (L)	0	0	277m north-east
030-AA-174016	South of Oakleigh	SK 17393 00698	P/A	4	16 April 2013	14 May 2013	0	0	0	0	0	273m north-east
030-AA-174019	South of Oakleigh	SK 16347 00894	P/A	4	16 April 2013	14 May 2013	0	1 (L)	0	0	0	37m south-west
030-AA-174020	South of Oakleigh	SK 16555 00950	P/A (	4	16 April 2013	14 May 2013	0	0	0	0	0	Within land required
030-AA-175001	South-east of Brockhurst	SK 16039 01348	P/A	4	16 April 2013	14 May 2013	0	0	0	1	1 (L)	Within land required
030-AA-175003	South-east of Brockhurst	SK 16056 00975	P/A	4	16 April 2013	14 May 2013	0	1 (L)	0	1	10 (L)	168m south-west
030-AA-175011	West of Roundhill Wood	SK 15866 01040	P/A (	4	16 April 2013	14 May 2013	0	0	0	0	0	119m south-west
030-AA-176001	North-east of Brockhurst	SK 15431 02321	P/A	4	16 April 2013	06 June 2013	0	0	0	0	0	Within land required
030-AA-176002	Bourne Brook and Bourne Cut Corridor	SK 15727 01892	P/A	4	16 April 2013	14 May 2013	0	4 (L)	0	2	12 (L)	16m south-west
030-AA-176003	West of Brockhurst	SK 15557 02835	P/A	4	09 May 2012	30 May 2012	0	0	0	1	2 (L)	82m north-east
030-AA-176009	East of Hints	SK 15054 02251	P/A	4	16 April 2013	14 May 2013	0	0	0	1	1 (L)	145m south-west
030-AA-176010	North of Hints	SK 15869 03010	P/A	4	16 April 2013	06 June 2013	0	4 (L)	0	2	8 (L)	407m north-east
030-AA-177002	North of Brockhurst Lane (known locally as Rookery Lane), east of Hints	SK 15586 02879	P/A	4	17 April 2013	15 May 2013	0	0	0	1	0	108m east

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-177004	North of Brockhurst Lane (known locally as Rookery Lane), east of Hints	SK 15501 02896	P/A	4	17 April 2013	15 May 2013	0	0	0	1	1 (L)	27m east
030-AA-177007	West of Bourne Brook and Bourne Cut Corridor	SK 15303 03155	P/A	4	17 April 2013	15 May 2013	0	4 (L)	0	8	40 (L)	1m east
030-AA-177010	West of Bourne Brook and Bourne Cut Corridor	SK 14721 02847	P/A	4	16 April 2013	14 May 2013	0	0	0	1	1 (L)	2m south-west
030-AA-178003	North of Church Wood	SK 15162 03900	P/A	2	24 June 2013	26 June 2013	3 (S)	3 (L)	0	1	1 (L)	7m west
030-AA-178018	South of A5, north-west of Weeford	SK 14439 04368	P/A	4	17 June 2013	27 June 2013	0	0	0	1	1 (L)	14m west
030-AA-179002	South-west of Packington Moor	SK 14331 05634	P/A	4	17 April 2013	15 May 2013	0	3 (L)	0	5	89 (L)	300m west
030-AA-179007	South-west of Packington Moor	SK 14496 05439	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	52m west
030-AA-179008	South-west of Packington Moor	SK 14554 05322	P/A	4	17 April 2013	15 May 2013	0	1 (L)	0	1	6 (L)	2m west
030-AA-179009	Moor covert	SK 14526 05487	P/A	4	17 April 2013	15 May 2013	0	0	0	1	6 (L)	102m west
030-AA-179011	North-east of Packington Moor	SK 14440 05604	P/A	4	17 April 2013	15 May 2013	0	0	0	0	8 (L)	225m west
030-AA-180007	North of Jerry's lane, south of Whittington Barracks	SK 15158 05895	P/A	4	17 April 2013	15 May 2013	0	0	0	1	1 (L)	352m east

Key:

Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (S) = Small; (M) = Medium; (L) = Large;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

N.B. a full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.77 Great crested newts have been found in ten of the 36 water bodies surveyed: there is one medium population size class and nine small population size classes. In addition, 27 of the water bodies were found to contain other amphibians (smooth newts in 11 of the water bodies, frogs in 22 and toads in 22).

#### *Desk study*

- 2.4.78 Staffordshire Environmental Record provided 38 great crested newt records within 5km of the land required for the construction of the Proposed Scheme.
- 2.4.79 No current records lie within 1km of the land required for the construction of the Proposed Scheme within CFA21.
- 2.4.80 A review has been undertaken of developments within 1km of the Proposed Scheme. There are 12 developments within 1km of the land required for the construction of the Proposed Scheme within this area, none of which have records of great crested newt surveys undertaken.

#### *Discussion of combined results*

- 2.4.81 Given the records provided from Staffordshire Ecological Record it appears that great crested newts are abundant within Staffordshire and, given the survey results, it is likely that great crested newts are widespread within the study area.
- 2.4.82 Local wildlife site criteria for Staffordshire were reviewed to identify any sites that would qualify as LWS under the Guidelines for the Selection of Sites of County Biological Importance in Staffordshire<sup>21</sup>. Within CFA21, one water body (030-AA-172001) may qualify as LWS due to the presence of a medium great crested newt population. This water body is located within the land required for the construction of the Proposed Scheme.
- 2.4.83 Water bodies with known presence of great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations have been assigned from desk top study and aquatic survey results only, according to the methodology identified within Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.
- 2.4.84 Within this area there are four assumed great crested newt metapopulations. Table 31 summarises these great crested newt metapopulations and details the associated population size classes. The population size class has been estimated using the sum of the peak counts from all known great crested newt populations from a single nights survey visit within the assumed metapopulation.

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<sup>21</sup> Staffordshire Wildlife Trust February 2008, Version 4.02 (May 2011).

Table 31: Summary of assumed great crested newt metapopulations in CFA21

CFA	Assumed Metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme (m) and orientation
CFA21	AMP25	South of Birmingham and Fazeley Canal	030-AA-172015, 030-AA-172003	Small (peak count eight, made up of two small (one and seven))	Within land required
CFA21	AMP26	South of Birmingham and Fazeley Canal	030-AA-172004, 030-AA-172007, 030-AA-172006, 030-AA-172001, 030-AA-172005	Medium (peak count 23, made up of one medium (11) and three small (three, two and seven))	Within land required
CFA21	AMP27	South of Sutton Road	030-AA-174009, 030-AA-174008, 030-AA-174016	Medium (peak count 11, made up of two small (eight and three))	Within land required
CFA21	AMP28	South of A5	030-AA-178003, 030-AA-178016	Small (peak count three)	Within land required

## CFA22 Whittington to Handsacre

### Scoping

2.4.85 A total of 259 water bodies have been identified from aerial photography and OS maps within 500m of the land required for the construction of the Proposed Scheme. Of these 259 water bodies, 42 have been scoped out of further assessment due to distance from the Proposed Scheme and or the presence of physical barriers between the water bodies and the Proposed Scheme. Of the remaining 218 water bodies, a further 55 were scoped out following walkover surveys. The remaining 162 water bodies were scoped in for further assessment:

- 54 water bodies within the land required for the construction of the Proposed Scheme;
- 55 water bodies between the land required for the construction of the Proposed Scheme and 100m;
- 39 water bodies between 100m and 250m from the land required for the construction of the Proposed Scheme; and
- 14 water bodies between 250m and 500m from the land required for the construction of the Proposed Scheme

2.4.86 Table 32 summarises the rationale for those ponds scoped into the assessment which are more than 250m from the land required for the construction of the Proposed Scheme.

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Table 32: Summary of those water bodies located more than 250m from the land required for the construction of the Proposed Scheme scoped into amphibian assessment within CFA22

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping in	CFA	Distance from the land required for the construction of the Proposed Scheme <sup>22</sup> (m) and orientation
030-AA-185013	South of Fradley Park	SK 14660 11586	Good habitat connectivity to Proposed Scheme	CFA21	266m north-east
030-AA-186002	South of Fradley Park	SK 14636 11698	Good habitat connectivity to Proposed Scheme	CFA21	273m north-east
030-AA-186018	West of Fradley Park	SK 14468 12195	Isolated by route, industrial estate and minor road opposite direction	CFA21	342m north-east
030-AA-186027	South of Curborough	SK 13320 11522	Good habitat connectivity to Proposed Scheme with limited habitat near	CFA21	402m west
030-AA-186028	South of Curborough	SK 13275 11523	Good habitat connectivity to Proposed Scheme with limited habitat near	CFA21	429m west
030-AA-186029	South of Curborough	SK 13238 11778	Good habitat connectivity to Proposed Scheme with limited habitat near	CFA21	317m west
030-AA-186030	South of Curborough	SK 13129 11750	Good habitat connectivity to Proposed Scheme with limited habitat near	CFA21	429m west
030-AA-187013	North of Curborough	SK 13365 12293	Good habitat connectivity to Proposed Scheme	CFA21	282m south-west
030-AA-187014	South of Fradley Wood	SK 14115 13275	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	CFA21	477m north-east
030-AA-187028	Fradley Wood	SK 13885 13385	Good habitat connectivity to Proposed Scheme	CFA21	357m north-east
030-AA-187030	Fradley Wood	SK 14072 13602	Good habitat connectivity to Proposed Scheme	CFA21	362m north-east
030-AA-190029	South of Vicars Coppice	SK 10945 13259	Good habitat connectivity to Proposed Scheme, with limited suitable habitat near water body	CFA21	329m south-west
030-AA-191030	Hanch Reservoir	SK 10041 13949	Good habitat connectivity to Proposed Scheme	CFA21	282m south-west
030-AA-191039	Hanch Reservoir	SK 10041 13949	Good habitat connectivity to Proposed Scheme	CFA21	279m south-west

<sup>22</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.

## Field survey

### HSI/walkover

2.4.87 Following the completion of walkover surveys, incorporating a HSI survey where appropriate, 55 water bodies were scoped out of further assessment, as shown in Table 33.

Table 33: Summary of locations where requirement for further survey was scoped out following walkover/HSI survey within CFA22

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>23</sup> (m) and orientation
030-AA-183002	South of Wyrley and Essington Canal	SK 15027 08881	Not present	106m east
030-AA-183006	South-west of Wyrley and Essington Canal	SK 14828 09206	Canal	Within land required
030-AA-183009	North-west of Wyrley and Essington Canal	SK 15024 09380	Canal	1m east
030-AA-183011	East of Fulfen Wood	SK 15007 09912	Canal	Within land required
030-AA-183014	Huddlesford	SK 15333 09426	Canal	1m east
030-AA-183017	South of Wyrley and Essington Canal	SK 14975 08804	Dry	31m east
030-AA-183018	West of Huddlesford	SK 14628 09512	Dry	5m west
030-AA-183019	East of Litchfield	SK14327 09554	Flowing water body	20m west
030-AA-184005	East of Streethay Wharf	SK 14839 10415	Flowing water body	Within land required
030-AA-184006	East of Streethay Wharf	SK 14774 10719	Canal	2m east
030-AA-185006	North of Streethay Wharf	SK 14896 11185	Canal	19m east
030-AA-185008	North of Streethay Bridge	SK 14821 11419	Flowing water body	296m east
030-AA-185009	North of Streethay Bridge	SK 14564 11514	Not present	22m east
030-AA-186007	South-west of Fradley Park	SK 14103 11930	Flowing water body	Within land required
030-AA-186009	East of Curborough	SK 13915 12279	Not present	Within land required
030-AA-186010	East of Curborough	SK 13915 12279	Not present	Within land required

<sup>23</sup> Hereafter the term 'land required' is used as a shortened version of the full term 'land required for the construction of the Proposed Scheme'.



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Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>23</sup> (m) and orientation
030-AA-186011	West of Fradley Park	SK 13960 12567	Tank not suitable for amphibians	19m north-east
030-AA-186020	West of Fradley Park	SK 14040 12215	Dry	Within land required
030-AA-187002	Fradley Wood	SK 13467 13297	Dry	Within land required
030-AA-187003	Fradley Wood	SK 13590 13407	Flowing water body	Within land required
030-AA-187016	Fradley wood	SK 13794 13278	Not present	357m north-east
030-AA-187021	South-east of Broken Down Wood	SK 13717 13595	Dry	109m north-east
030-AA-187022	Fradley Wood	SK 13751 13727	Not present	108m north-east
030-AA-187024	East of Fradley Park	SK 14120 13244	Dry	420m north-east
030-AA-187026	Big Lyntus Wood	SK 13088 13053	Dry	63m south-west
030-AA-187027	Fradley Wood	SK 13708 13671	Inaccessible due to health and safety measures	137m north-east
030-AA-187029	Fradley Wood	SK 13794 13277	Dry	220m north-east
030-AA-187035	Fradley Wood	SK 14058 13284	Dry	418m north-east
030-AA-188002	South-west of Brokendown Wood	SK 13229 13459	Flowing water body	Within land required
030-AA-188006	South of Broken Down Wood	SK 13022 13289	Flowing water body	8m north-east
030-AA-188008	South of Trent and Mersey Canal	SK 12133 14079	Canal	Within proposed scheme
030-AA-188009	North-east of Ravenshaw Wood	SK 12770 13542	Canal	6m south-west
030-AA-188010	North-east of Ravenshaw Wood	SK 12783 13529	Canal	15m south-west
030-AA-188014	North-east of Brokendown wood	SK 13173 14029	Not present	78m north
030-AA-188021	North-east of Ravenshaw Wood	SK 12605 13672	Flowing water body	Within land required
030-AA-188022	Ravenshaw Wood	SK 12504 13673	Dry	Within land required
030-AA-188025	East of Brokendown Wood	SK 13399 13550	Dry	Within land required

Ecology survey code	Location	OS centroid grid reference	Brief rationale for scoping out	Distance from the land required for the construction of the Proposed Scheme <sup>23</sup> (m) and orientation
030-AA-188026	West of Fradley Lock	SK 13120 14044	Not present	119m north-east
030-AA-189002	South of Ravenshaw Wood	SK 12183 13463	Not present	Within land required
030-AA-189003	South of Ravenshaw Wood	SK 12151 13453	Not present	6m south-west
030-AA-189007	Slaish Wood	SK 11759 14096	Not present	Within land required
030-AA-189009	South-east of Kings Bromley Marina	SK 11734 14157	Flowing water body	Within land required
030-AA-189010	North of Tomhay Wood	SK 11673 13751	Not present	Within land required
030-AA-189017	East of Kings Bromley Marina	SK 11728 14453	Flowing water body	56m north-east
030-AA-189021	Black Slough Wood	SK 11763 14016	Dry	Within land required
030-AA-189026	South-west of Kings Bromley marina	SK 11490 13990	Dry	Within land required
030-AA-189030	East of Kings Bromley Marina	SK 11695 14595	Not present	80m north-east
030-AA-189038	South-west of Ravenshaw Wood	SK 11855 13668	Dry	34m south-west
030-AA-190024	South of Kings Bromley Marina	SK 10631 14275	Not present	Within land required
030-AA-190039	North of Kings Bromley Marina	SK 11450 14910	Flowing water body	Within land required
030-AA-191003	East of Ashton Hays	SK 10340 14619	Not present	82m north-east
030-AA-191004	East of Ashton Hays	SK 10328 14628	Not present	81m north-east
030-AA-191036	East of Ashton Hays	SK 10362 14650	Dry	86m north-east
030-AA-191038	East of Ashton Hays	SK 10425 14560	Dry	14m north-east
030-AA-192011	North-east of Handsacre	SK 09601 15660	Dry	134m north-east

### *Presence/absence and population size class estimate surveys*

2.4.88 Presence/absence surveys were undertaken at 65 water bodies within the area.

- 2.4.89 Where the presence of amphibians was confirmed, but an insufficient number of visits were undertaken to enable a population size class assessment, the highest peak count recorded has been used to identify the minimum population size class that is present.
- 2.4.90 The results of surveys for presence/absence and population size class assessment are detailed within Table 34.

Table 34: Summary of results from surveys for amphibian presence/absence and population size class assessment within CFA22

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-181001	Whittington Health Golf Club	SK 14610 07326	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	16m west
030-AA-182001	West of Whittington	SK 14867 08316	P/A	4	17 April 2013	15 May 2013	0	0	0	1	63 (L)	8m east
030-AA-182002	West of Whittington	SK 14899 08428	P/A	4	17 April 2013	15 May 2013	0	4 (L)	0	3	7 (L)	11m east
030-AA-182003	West of Whittington	SK 14870 08269	P/A	4	17 April 2013	15 May 2013	0	0	0	0	0	Within land required
030-AA-182005	West of Whittington	SK 14677 08351	P/A	4	17 April 2013	15 May 2013	0	1 (L)	0	2	13 (L)	32m west
030-AA-183020	South of Wyrley and Essington Canal	SK 14769 09059	P/A	4	08 May 2013	16 May 2013	0	0	0	4	0	Within land required
030-AA-185007	South of Fradley Park	SK 14550 11353	P/A	4	16 May 2013	04 June 2013	0	6 (L)	0	1	1 (L)	120m east
030-AA-185013	South of Fradley Park	SK 14660 11586	P/A	4	18 April 2013	30 May 2013	3 (S)	8 (L)	0	0	1 (L)	257m north-east
030-AA-186001	South of Fradley Park	SK 14291 11709	P/A	4	18 April 2013	23 May 2013	15 (M)	1 (L)	0	1	18 (L)	5m north-east
030-AA-186002	South of Fradley Park	SK 14636 11698	P/A	4	08 May 2013	04 June 2013	10 (S)	5 (L)	0	0	0	254m north-east
030-AA-186003	South of Fradley Park	SK 14523 11710	PCS	6	18 April 2013	10 June 2013	33 (M)	12 (G)	0	0	3 (L)	181m north-east
030-AA-186005	South of Fradley Park	SK 14287 11885	PCS	6	18 April 2013	03 June 2013	3 (S)	1 (L)	0	0	0	53m north-east

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-186017	South of Fradley Park	SK 14357 11737	PCS	6	18 April 2013	03 June 2013	1 (S)	3 (L)	0	3	1 (L)	1m north-east
030-AA-186018	West of Fradley Park	SK 14468 12195	P/A	3	11 June 2013	20 June 2013	0	0	1 (L)	0	0	278m north-east
030-AA-186022	South-west of Fradley Park	SK 14289 11746	PCS	6	18 April 2013	03 June 2013	1 (S)	0	0	1	1 (L)	1m east
030-AA-187004	Fradley Wood	SK 13504 13400	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	26m north-east
030-AA-187007	Fradley Wood	SK 13480 13475	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	Within land required
030-AA-187018	Fradley Wood	SK 13627 13679	P/A	4	23 April 2013	21 May 2013	31 (M)	4 (L)	0	0	5 (L)	50m north-east
030-AA-187019	Fradley Wood	SK 13672 13571	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	78m north-east
030-AA-187020	South-east Broken Down Wood	SK 13750 13542	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	233m north-east
030-AA-187028	Fradley Wood	SK 13885 13385	P/A	4	23 April 2013	21 May 2013	1 (S)	3 (L)	0	2	1 (L)	350m north-east
030-AA-187030	Fradley Wood	SK 14072 13602	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	362m north-east
030-AA-187036	Fradley Wood	SK 13689 13689	P/A	3	23 April 2013	21 May 2013	0	2 (L)	0	0	0	42m north-east
030-AA-188001	North of Big Lyntus Wood	SK 12984 13426	P/A	4	05 June 2013	18 June 2013	0	8 (L)	0	1	1 (L)	5m north-east
030-AA-188003	North of Big Lyntus Wood	SK 13072 13211	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	6m south-west

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-188012	North-west of Ravenshaw Wood	SK 12161 13748	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	5m south
030-AA-188013	West of Fradley Lock	SK 13173 14029	P/A	4	23 April 2013	21 May 2013	1 (S)	15 (G)	0	3	8 (L)	37m north-east
030-AA-188015	West of Fradley Lock	SK 13120 14044	P/A	4	23 April 2013	21 May 2013	0	2 (L)	0	6	0	119m north
030-AA-188017	West of Ravenshaw Wood	SK 12377 13481	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	3m south
030-AA-188018	North-west of Big Lyntus Wood	SK 12871 13020	P/A	4	23 April 2013	21 May 2013	0	0	0	1	2 (L)	202m south
030-AA-188019	North-west of Ravenshaw Wood	SK 12163 13690	P/A	4	22 April 2013	20 May 2013	0	0	0	1	0	Within land required
030-AA-188020	West of Ravenshaw Wood	SK 12319 13543	P/A	4	22 April 2013	20 May 2013	0	0	0	2	2 (L)	Within land required
030-AA-188024	West of Brokendown Wood	SK 13289 13561	P/A	4	23 April 2013	21 May 2013	0	0	0	0	0	Within land required
030-AA-188029	North-west Brokendown Wood	SK 12943 13626	P/A	4	10 June 2013	24 June 2013	0	0	0	1	0	Within land required
030-AA-188030	North-west Brokendown Wood	SK 12924 13846	P/A	4	10 June 2013	24 June 2013	0	0	0	2	2 (L)	114m north
030-AA-189001	South of Kings Bromley Marina	SK 11544 13888	P/A	4	22 April 2013	20 May 2013	0	4 (L)	0	0	0	Within land required
030-AA-189004	West of Ravenshaw Wood	SK 12177 13597	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-189005	West of Ravenshaw Wood	SK 12066 13560	P/A	4	30 April 2013	29 May 2013	0	0	0	1	0	Within land required

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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-189008	North-west of Ravenshaw Wood	SK 11719 14296	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-189011	North-west of Ravenshaw Wood	SK 12120 13942	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	Within land required
030-AA-189013	West of Ravenshaw Wood	SK 11870 13427	P/A	4	30 April 2013	29 May 2013	0	0	0	1	1 (L)	148m south
030-AA-189016	West of Ravenshaw Wood	SK 11624 13771	P/A	4	30 April 2013	03 June 2013	0	0	0	1	0	Within land required
030-AA-189018	South-east of Kings Bromley Marina	SK 11619 14285	P/A	4	22 April 2013	20 May 2013	0	5 (L)	0	3	1 (L)	3m north
030-AA-189024	South-west of Kings Bromley Marina	SK 11514 14123	P/A	4	22 April 2013	20 May 2013	0	0	0	1	0	Within land required
030-AA-189025	South-west of Kings Bromley Marina	SK 11327 14174	P/A	1	26 June 2013	26 June 2013	0	0	0	0	0	Within land required
030-AA-189027	South-west of Kings Bromley Marina	SK 11389 13852	P/A	4	18 June 2013	26 June 2013	0	0	0	1	0	Within land required
030-AA-189028	South-west of Kings Bromley Marina	SK 11502 14078	P/A	4	22 April 2013	20 May 2013	0	0	0	0	0	9m north-east
030-AA-189029	South-west of Kings Bromley Marina	SK 11774 13856	P/A	4	30 April 2013	03 June 2013	0	0	0	3	0	Within land required
030-AA-189037	South-west of Kings Bromley Marina	SK 11635 13751	P/A	4	30 April 2013	03 June 2013	0	0	0	0	0	16m south
030-AA-189039	South-west Ravenshaw Wood	SK 12063 13576	P/A	4	30 April 2013	29 May 2013	0	1 (L)	0	1	0	Within land required
030-AA-189040	West of Kings Bromley Marina	SK 11609 14552	P/A	4	22 April 2013	20 May 2013	0	4 (L)	0	1	0	Within land required

Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-189041	South-west of Ravenshaw Wood	SK 13659 13659	P/A	4	30 April 2013	29 May 2013	0	2 (L)	0	7	2 (L)	Within land required
030-AA-190002	Vicars coppice	SK 10895 13996	P/A	3	20 May 2013	28 May 2013	0	0	0	4	4 (L)	Within land required
030-AA-190022	Vicars coppice	SK 10854 14075	P/A	3	20 May 2013	28 May 2013	0	3 (L)	0	1	0	Within land required
030-AA-190023	North of Vicars coppice	SK 10770 14183	P/A	4	22 May 2013	12 June 2013	0	16 (G)	0	2	0	Within land required
030-AA-190025	West of Kings Bromley Marina	SK 10777 14427	P/A	3	20 May 2013	28 May 2013	0	0	0	1	0	Within land required
030-AA-190026	West of Kings Bromley Marina	SK 10812 14390	P/A	3	20 May 2013	28 May 2013	0	0	0	2	1 (L)	Within land required
030-AA-190028	West of Vicars Coppice	SK 10641 13942	P/A	4	22 May 2013	12 June 2013	0	0	0	2	0	Within land required
030-AA-191015	West of Hanch Reservoir	SK 09995 13804	P/A	4	18 April 2013	30 May 2013	12 (M)	3 (L)	0	2	15 (L)	201m south-west
030-AA-191030	Hanch Reservoir	SK 09953 13880	P/A	4	18 April 2013	30 May 2013	0	4 (L)	0	0	3 (L)	282m south-west
030-AA-191037	Hanch Reservoir	SK 10038 14019	P/A	4	18 April 2013	04 June 2013	0	0	0	0	0	227m south-west
030-AA-191039	Hanch Reservoir	SK 10041 13949	P/A	4	18 April 2013	30 May 2013	0	0	0	0	0	279m south-west
030-AA-192002	East of Handsacre	SK 09636 15398	P/A	4	18 April 2013	28 May 2013	0	0	0	1	0	99m north-east
030-AA-192015	East of Handsacre	SK 09424 15294	P/A	4	18 April 2013	28 May 2013	0	0	0	0	0	51m south-west



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Ecology survey code	Location	OS centroid grid reference	Survey type	No. of visits completed	First survey visit	Last survey visit	Peak count during single visit with single method					Distance from the proposed scheme (m) and orientation
							Great crested newt	Smooth newt	Palmate newt	Common frog	Common toad	
030-AA-192016	East of Handsacre	SK 09428 15308	P/A	4	18 April 2013	28 May 2013	0	0	0	0	0	40m south-west

Key:

Bracketed text within species column indicates the relevant population size class for the peak count obtained as follows:

- Great crested newt – (H) = High; (M) = Medium; (L) = Low;
- Smooth and palmate newt = peak count less than 10 = Low (L); peak count 10-100 = Good (G); peak count over 100 = Exceptional (E);
- Common frog = spawn clumps counted less than 50 = Low (L); 50-500 = Good (G); greater than 500 = Exceptional (E); and
- Common toad = peak count of less than 100 = Low (L); peak count 100-1000 = Good (G); peak count greater than 1000 = Exceptional (E).

N.B. a full six visits are required in order to obtain a robust population size class assessment. However, an indication of the corresponding size class category is shown here for all peak counts in order to show the minimum size class known to be present at those sites where the full six visits could not be completed during the time period available for survey.

- 2.4.91 Great crested newts have been found in 11 of the 65 water bodies surveyed: there are four medium population size classes and seven small population size classes. In addition 33 of the water bodies were found to contain other amphibians (smooth newts in 14 of the water bodies, palmate newts in one, common frogs in 29 and common toads in 14).

### *Desk study*

- 2.4.92 Staffordshire Ecological Record provided 38 great crested newt records within 5km of the land required for the construction of the Proposed Scheme. Five current records lie within 1km of the land required for the construction of the Proposed Scheme within this area. Table 35 details the records of great crested newts within 1km of the land required for the construction of the Proposed Scheme.

Table 35: Desk study records within 1km of the land required for the construction of the Proposed Scheme in CFA22

Number of records	Common name	Peak count	Year of record	Distance (m) and orientation from the land required for construction of the Proposed Scheme	Nearest water body
2	Great crested newt	1	1998-1999	450m south	100m from 030-AA-189016
1	Great crested newt	1	2004	110m north	030-AA-186001
1	Great crested newt	2	2004	410m north	030-AA-185013
1	Great crested newt	1	2007	580m north	030-AA-187014

- 2.4.93 A review has been undertaken of developments within 1km of the Proposed Scheme.

- 2.4.94 Two developments have records of great crested newt surveys with results available. These results correspond to six water bodies, two of which have not been surveyed to support the EIA due to access restrictions. Table 36 details the records available for these developments.

Table 36: Summary of amphibian survey results from other developments in CFA22

CFA	Committed development reference	Development description	Water body reference	Results including year of survey
CFA22	07/00774/OUTM	Industrial and warehouse development (use class B1, B2, B8) with ancillary offices, associated gatehouses, car parking and servicing, landscaping, roads and footpaths	030-AA-185013	Three great crested newt and eggs, and 11 smooth newts (2007)
			030-AA-186001	Four smooth newts – 2007
			030-AA-186002	Seven great crested newts and 7 smooth newts (2007)
			030-AA-186004 (not surveyed)	One great crested newt and 20 smooth newts (2007)
			030-AA-186005	No amphibians found (2007)

CFA	Committed development reference	Development description	Water body reference	Results including year of survey
CFA22	10/01403/REMM	Mixed-use development (Phase 4) comprising warehousing/manufacturing units with ancillary offices, medical centre, nursery and office park and all associated works	030-AA-187014 (not surveyed)	Six great crested newts and 22 smooth newts (2011)

### *Discussion of combined results*

- 2.4.95 Given the records provided from Staffordshire Ecological Record it appears that great crested newts are abundant within Staffordshire and, given the survey results, it is likely that great crested newts are widespread within the study area
- 2.4.96 Local wildlife site criteria for Staffordshire were reviewed to identify any sites that would qualify as LWS under the Guidelines for the selection of Sites of County Biological Importance in Staffordshire<sup>24</sup>. Within this area, four water bodies may qualify as LWS due to the presence of medium great crested newt populations. These water bodies are shown in Table 37.

Table 37: Summary of those water bodies which meet the Staffordshire LWS criteria in CFA22

Pond reference	Distance from the land required for construction of the Proposed Scheme (m) and orientation	Findings
030-AA-186001	5m north-east	Medium great crested newt population, smooth newt, common frog and common toad
030-AA-186003	181m north-east	Medium great crested newt population, smooth newt and common toad
030-AA-187018	50m north-east	Medium great crested newt population, smooth newt and common toad
030-AA-191015	201m south-west	Medium great crested newt population, smooth newt, common frog and common toad

- 2.4.97 Water bodies that are known to support great crested newt populations have been separated into clusters which are likely to support metapopulations. The assumed metapopulations have been assigned from desk top study and aquatic survey results only, according to the methodology identified within the Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2); no terrestrial survey has taken place.
- 2.4.98 Within this area there are four assumed great crested newt metapopulations. Table 38 summarises these great crested newt metapopulations and details the associated population size classes. The size class has been estimated using the sum of the peak counts from all known great crested newt populations from a single nights survey visit within the assumed metapopulation.

<sup>24</sup> Staffordshire Wildlife Trust February 2008, Version 4.02 (May 2011).

Table 38: Summary of assumed great crested newt metapopulations in CFA22

CFA	Assumed Metapopulation (AMP) reference	Location	Ecology survey code of ponds within assumed metapopulation	Estimated population size class of metapopulation	Distance from the land required for the construction of the Proposed Scheme (m) and orientation
CFA22	AMP29	South of Fradley Park	030-AA-186005, 030-AA-186004, 030-AA-186003, 030-AA-186017, 030-AA-186001, 030-AA-185014, 030-AA-186002, 030-AA-185013, 030-AA-185007, 030-AA-185012, 030-AA-185010, 030-AA-185014, 030-AA-186008	Medium (two medium peak count 33 and four small peak count 10)	Within land required
CFA22	AMP30	Fradley Wood	030-AA-187028, 030-AA-187004, 030-AA-187007, 030-AA-187019, 030-AA-187018, 030-AA-187036, 030-AA-188028	Medium (one medium peak count 31 and one small peak count 1)	Within land required
CFA22	AMP31	West of Fradley Lock	030-AA-188013, 030-AA-188015	Small (one small peak count 1)	130m north
CFA22	AMP32	Hanch Reservoir	030-AA-191017, 030-AA-191016, 030-AA-191014, 030-AA-190035, 030-AA-190034, 030-AA-191030, 030-AA-191037, 030-AA-191039, 030-AA-191015	Medium (one medium peak count 12)	Within land required

## 3 Reptiles

### 3.1 Introduction

- 3.1.1 This section of the appendix presents details of baseline information relating to reptiles for the section of the Proposed Scheme that will pass through CFA16 to CFA22 inclusive.

### 3.2 Methodology

- 3.2.1 Details of the standard methodology utilised for reptile surveys are provided in Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2).
- 3.2.2 Records of reptiles within 5km of the centreline of the route of the Proposed Scheme were available from Warwickshire Biological Records Centre, the Biological Records Centre for Birmingham and the Black Country (ECORE) and Staffordshire Ecological Record. This information included Local Wildlife Site (LWS) citations that were reviewed for relevant information on reptiles. In addition, anecdotal information was gained during a meeting with the Warwickshire County Recorder for reptiles arranged by Warwickshire Wildlife Trust. All records of reptiles provided have been taken into account and those within 1 km from the land required for the construction of the Proposed Scheme have been reviewed in detail. Information relating to reptiles was also taken from the Warwickshire, Coventry and Solihull Biodiversity Action Plan (BAP) Adder Species Action Plan Progress Report 2011-2007.
- 3.2.3 Initial scoping of sites for detailed reptile surveys was conducted based on aerial photos and desk study information. Information was then collected during Phase 1 habitat surveys carried out on all sites where access was available. If suitable habitat for reptiles was present a reptile habitat assessment proforma was completed during the Phase 1 survey or the need for a habitat assessment was highlighted in the target notes.
- 3.2.4 If during the Phase 1 habitat survey no suitable habitats to support reptiles were identified no habitat assessment was required and the sites were scoped out of further survey. This included habitats which were too small and isolated to support a population of reptiles or where habitats were considered to have limited use for foraging or commuting reptiles such as isolated hedgerows or ponds.
- 3.2.5 Where reptile habitat assessments were carried out habitats which were assessed as poor were scoped out of further presence/absence surveys; these habitats tended to be smaller areas of poorly connected and/or sub-optimal habitat. Where poor habitats were recorded this does not indicate the absence of reptiles.
- 3.2.6 Population size class for reptiles is derived from the highest number of individuals recorded in a single visit and the size of the area surveyed in order to give a number of animals per hectare. The figures are taken from:
- Herpetofauna Groups of Britain and Ireland (1998) Evaluating Local Mitigation/Translocation Programmes: Maintaining Best Practice and Lawful Standards; and

- HGBI advisory notes for Amphibian and Reptile groups (ARGS) HGBI, c/o Froglife, Halesworth. Unpublished.

### 3.3 Deviations, constraints and limitations

- 3.3.1 No deviations to the standard methodology were applied, and subject to the constraints and limitations identified in the following section, all surveys were conducted as per the standard methodology provided in Ecology technical note: Ecological field survey methods and standards (Volume5: Appendix CT-001-000/2).
- 3.3.2 Several sites were noted as suitable to support common reptile species but could not be surveyed due to health and safety reasons or were not surveyed due to levels of high disturbance by members of the public that could have lead to interference with the survey or injury to reptiles; these included residential gardens and public rights of way and are listed below:
- Offchurch Greenway (dismantled railway/public right of way) within CFA17;
  - two residential properties east of Little Poors Wood on Cromwell Lane in CFA18 (WK242242 – 030-RE-146002 and WK418910 – 030-RE-146003);
  - Kenilworth Greenway (dismantled railway/public right of way) in CFA18; and
  - land behind a residential property 380 m east of Water Orton Primary School on Vicarage Lane, Water Orton in CFA19.
- 3.3.3 Table 39 summarises all locations where reptile surveys were scoped in but no access was available for survey.
- 3.3.4 Some land did not become accessible until late in 2013, including the majority of the land within the motorway network (surrounded by the M6, M42 and M42 link) within CFA19, not giving enough time to complete detailed reptile surveys. Access for reptile surveys has been limited elsewhere, particularly within CFA16 and CFA17. These sites are detailed in Table 40.
- 3.3.5 Locations which were assessed as having the potential to support reptiles during initial review of aerial photographs and desk study information but which were scoped out of further survey after detailed habitat assessment due to poor quality habitat are given in Table 41.

Table 39: Summary of locations where requirement for reptile survey identified but no access available for survey within CFA16 to CFA22 inclusive

Survey site name	Location	OS grid reference	Description of proposed survey location	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
Fish ponds at Lower Radbourne	East of Lower Radbourne Farm	SP 44014, 56981	Habitat areas include areas of scrub and woodland around fishing ponds connected to the wider landscape through hedgerows/streams. Habitat areas have been assessed as being suitable for reptiles from a high level desk study based on aerial photos.	CFA16	Within land required

Survey site name	Location	OS grid reference	Description of proposed survey location	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
Ladbroke Grove Farm	South-east of Ladbroke	SP 43309, 58227	Habitats appear to include a single field containing rough grassland, bordered by thick/mature hedgerows connecting the area to the wider landscape. Habitat areas have been assessed as being suitable for reptiles from the high level desk study based on aerial photos. Probably of limited suitability to reptiles given the intensive agriculture in surrounding fields.	CFA16	Within land required
River Itchen at Thorpe Bridge	Land on the north and south side of the A425 Leamington Road, Southam and Land at Lower Farm, Stoneythorpe, Southam	SP 40158, 61504	Rough vegetation on and around banks of River Itchen connected to wider area through river, and hedgerows/woodlands. Appears suitable for common reptile species particularly grass snake and common lizard.	CFA16	Within land required
Plantation woodland and reservoir at Burnt Firs	South-east of Offchurch near Burnt Heath Farm	SP 37428, 65242	Reservoir and plantation woodland with patches of rough grassland appear suitable for common reptile species such as grass snake. Very limited connectivity to surrounding landscape features due to intensive arable farming and roads.	CFA17	Within land required
South Cubbington Wood	East of Cubbington	SP 35175, 68493	Habitat is open broad leaved woodland with some potential for reptiles, good connections with surrounding landscape through hedgerows and North Cubbington Wood. Access was only available to a very small strip of this woodland which is not within the Proposed Scheme and was not large enough or suitable to conduct reptile surveys.	CFA17	Within land required

Table 40: Summary of locations where requirement for reptile survey identified but access agreed too late for reptile surveys to commence in CFA16 to CFA22 inclusive

Survey site name	Location	OS grid reference	Description of proposed survey location	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
Long Itchington and Ufton Woods SSSI	Long Itchington and Ufton Woods SSSI	SP38941, 62827	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA16	Proposed Scheme passes beneath the SSSI in tunnel
River Leam	Habitats along the River Leam	SP 35866, 67513	Small areas of rough grassland and bank side habitat among intensive	CFA17	Within land

Survey site name	Location	OS grid reference	Description of proposed survey location	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
	near Lower Grange east of Cubbington		arable surrounds good habitat links to wider landscape through the river corridor.		required
Dalehouse Farm	Near Finham Brook, east of Crackley	SP 30935, 73350	Varied habitat with dense hedgerows and semi improved grassland	CFA18	Within land required
Kenilworth Golf Course	Kenilworth	SP 31079, 72869	Habitat consists of managed grassland and wooded areas probably with areas of rougher grassland throughout.	CFA18	Within land required
Coleshill Estate	Land around Coleshill Manor Office Campus, south of Green Lane	SP 18612, 89289	Good habitat in woodland edge features and rough grassland isolated within a much larger area due to major roads and rivers.	CFA19	Within land required
Coleshill Estate	Land around Water Orton Primary School	SP 17846, 90038	Good habitat in woodland edge features particularly in southern section of site, isolated by road network.	CFA19	Within land required
Coleshill Estate	Land either side of Gilson Drive, east of the M6 Toll	SP 19059, 89908	Rough grassland habitat with hedgerows and scrub isolated by the road network.	CFA19	Within land required
Coleshill Estate	Land west of Cole End, east of M42	SP 19171, 88965	Good grassland habitats on site with hedgerow boundaries and a ditch. Isolated by the road network.	CFA19	Within land required
Coleshill Estate	Land South of Woodlands Cemetery	SP 18735, 88475	Short sward pasture grassland throughout the site with hedgerows and river banks.	CFA19	Within land required
Marl Pits (disused)	Land East of Upper House Farm, South-west of Drayton Bassett	SP 17894, 99232	Rough semi-improved grassland and scrub around old marl pits and agricultural reservoir assessed as good habitat for reptiles.	CFA21	Within land required

Table 41: Summary of sites scoped out of further survey after initial habitat assessment within CFA16 to CFA22 inclusive

Site reference	Location	OS grid reference	Assessment summary	CFA	Brief description of habitats
030-RE-129001	Habitats alongside the Grand Union Canal	438168, 263904	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA17	Dense scrub with semi-mature and mature trees



Site reference	Location	OS grid reference	Assessment summary	CFA	Brief description of habitats
030-RE-139001	Habitat close to the River Avon in Stoneleigh Park	SP 32140, 72196	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA18	Semi-improved grassland
030-RE-144001	Broadwells Wood, south of Burton Green	SP 28331, 75076	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA18	Improved grassland
030-RE-144002	Land surrounding South Hurst Farm, west of Roughknowles Wood.	SP 28389, 74866	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA18	Isolated ponds within arable fields and dense scrubby woodland
030-RE-163003	Land behind residential property 380 m east of Water Orton Primary School on Vicarage Lane, Water Orton	SP 18064, 90609	Mature garden with wild/over grown patches	CFA19	Residential property unsuitable for further survey
030-RE-171002	Land near Middleton Sewage Works, east of Middleton	SP 18451, 98256	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA20	A stream with vegetated banks
030-RE-174001	Great Bangley Farm on Bangley Lane, west of Drayton Bassett	SK 16579, 00887	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA21	Field margins of arable field
030-RE-191001	Land off Tuppenhurst Lane, west of King's Bromley Wharf.	SK 10430, 14623	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA22	Horse paddock with tall ruderal vegetation in margins
030-RE-182001	Ellfield House, north of Whittington Heath Golf Course	SK 14880, 08307	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA22	Farm yard with some suitable margins
030-RE-183001	Potter's Thatch between Huddlesford and Lichfield	SK 14774, 09384	Assessed as having poor habitat to support reptiles during Reptile Habitat Assessment	CFA22	Tussocky grassland adjacent to shaded ditch

## 3.4 Baseline

- 3.4.1 The results of reptile surveys are given in Table 42, followed by a discussion of the results by area. Reptile results are shown on Volume 5: Map Book – Ecology, Maps EC-07.
- 3.4.2 Of the six native reptile species in the UK only adder (*Vipera berus*), grass snake (*Natrix natrix*), slow worm (*Anguis fragilis*) and common lizard (*Zootoca vivipara*) are within the geographic range of the Proposed Scheme through CFA16 to CFA22 and have been recorded during surveys to support the EIA. Sand lizard and smooth snake have a restricted distribution to the south of the UK and would not be within the area.

3.4.3 Reptile records provided by Warwickshire Biological Records Centre within 5 km of the centreline of the route of the Proposed Scheme contained:

- 186 records of grass snake (63% of all reptile records provided within Warwickshire);
- 51 records of slow worm (17% of all reptile records provided within Warwickshire);
- 40 records of common lizard (13% of all reptile records provided within Warwickshire); and
- 20 records of adder (7% of all reptile records provided within Warwickshire).

3.4.4 This is likely to indicate the relative abundance of each species within Warwickshire, although the records are also likely to be affected by recording effort, the majority of records being associated with specific sites, many of which are designated habitats.

3.4.5 Records from Staffordshire Biological Record Centre also included all four of the widespread reptile species with a similar indication of relative abundance:

- 38 records of grass snake (68% of all reptile records provided within Staffordshire);
- 7 records of common lizard (13% of all reptile records provided within Staffordshire);
- 6 records of grass snake (11% of all reptile records provided within Staffordshire); and
- 5 records of grass snake (9% of all reptile records provided within Staffordshire).

## Appendix EC-002-003 | Reptiles

Table 42: Summary of reptile survey work undertaken in CFA16 to CFA22 inclusive

Ecology survey code	Survey location	OS grid reference	Survey method	Survey start date	Survey end date	No. survey visits completed	Survey result	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
030_RE_125001	Around a highways drainage pond by Gaydon Road, Southam	SP 4100, 6088	Refugia survey	24 April 2013	19 June 2013	7	5 grass snake (medium)	CFA16	Within land required
030_RE_122001	Ladbroke Hill Farm, Southam	SP 4285, 5926	Refugia survey	03 September 2012	07 June 2013	7	7 grass snake (low) 1 adder (low)	CFA16	Within land required
030_RE_132001	Fields Farm, Hunningham Road, Offchurch, Leamington Spa	SP 3633, 6712	Refugia survey	21 May 2013	20 June 2013	7	5 grass snake (low)	CFA17	Within land required
030_RE_143001	Part of Cryfield Grange Farm	SP 2965, 7449	Refugia Survey	24 April 2013	24 June 2013	7	14 grass snake (low)	CFA18	Within land required
030_RE_143002	Roughknowles Wood	SP 2881, 7473	Refugia Survey	24 May 2013	24 June 2013	7	4 grass snake (low)	CFA18	Within land required
030_RE_141001	Land on the south-east side of Dalehouse Lane, Kenilworth	SP 3147, 7319	Refugia Survey	30 May 2013	25 June 2013	7	1 grass snake (low)	CFA18	Within land required
030_RE_137001	Stoneleigh Park near Gilbert's Spinney	SP 3257, 7205	Refugia survey	10 September 2012	03 June 2013	7	21 grass snake (low)	CFA18	Within land required
030_RE_146001	Black Waste Wood	SP 2707, 7583	Refugia survey	23 May 2013	21 June 2013	7	No reptiles recorded	CFA18	Within land required
030_RE_163001	Old Saltleians Rugby Football, Club, Watton Lane, Water Orton	SP 1896, 9091	Refugia survey	04 June 2013	27 June 2013	7	No reptiles found	CFA19	Within land required
030_RE_164001	Land north of Watton Lane, Water Orton	SP 1883, 9110	Refugia survey	03 July 2012	12 June 2013	7	No reptiles found	CFA19	Within land required

Ecology survey code	Survey location	OS grid reference	Survey method	Survey start date	Survey end date	No. survey visits completed	Survey result	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
030_RE_164002	Coleshill Sewage Treatment Works	SP 1923, 9146	Refugia survey	04 September 2012	05 June 2013	7	33 grass snake (low)	CFA19	Within land required
030_RE_164002	Coleshill Sewage Treatment Works	SP 1923, 9146	Refugia survey	22 May 2013	27 June 2013	7	No reptiles recorded	CFA19	Within land required
030_RE_168001	Close to Marston Lane Bridge (between Belfry GC and M42)	SP 1917, 9488	Refugia Survey	01 June 2012	19 June 2013	13	13 grass snake (high)	CFA20	Within land required
030_RE_170001	Land east side of road Tamworth to Curdworth, Middleton – Hanson Quarries	SP 1884, 9743	Refugia Survey	05 September 2012	14 June 2013	7	29 grass snake (low)	CFA20	Within land required
030_RE_165001	Hams Hall Distribution Park	SP 1969, 9215	Refugia Survey	30 July 2012	19 June 2013	10	3 grass snake (low)	CFA20	Within land required
030 – RE – 167001	Plantation woodland near Marston Lane Bridge over the M42	SP 1912, 9441	Refugia Survey	14 June 2012	12 September 2012	10	1 grass snake (low) 1 common lizard (low) 1 slow worm (low )	CFA20	Within land required
030_RE_178001	Land off Flats Lane Weeford	SK 1472, 0456	Refugia survey	29 May 2013	25 June 2013	7	No reptiles found	CFA21	Within land required
030_RE_181001	Whittington Heath Golf Course	SK 1476, 0721	Refugia survey	14 June 2012	25 June 2013	10	2 common lizards (low)	CFA22	Within land required
030_RE_186001	Land at Alrewas Hayes, Lichfield	SK 1161, 1381	Refugia survey	01 August 2012	20 June 2013	8	No reptiles recorded	CFA22	Within land required
030-RE-189001	Black Slough (woodland)	SK 1161, 1381	Refugia Survey	01 August 2012	20 June 2013	8	No reptiles recorded	CFA22	Within land required

## Appendix EC-002-003 | Reptiles

Ecology survey code	Survey location	OS grid reference	Survey method	Survey start date	Survey end date	No. survey visits completed	Survey result	CFA	Distance from the land required for construction of the Proposed Scheme (m) and orientation
030_RE_187001	Land on the west side of Gorse Lane Fradley, Lichfield	SK 1373, 1382	Refugia Survey	08 May 2013	21 June 2013	7	No reptiles recorded	CFA22	130m north-east
030_RE_187003	Lane on the south side of Wood End Lane, Fradley, Lichfield	SK 1384, 1341	Refugia Survey	05 May 2013	27 June 2013	7	No reptiles recorded	CFA22	250m north-east
030_RE_188001	Black Slough Farm	SK1217, 1359	Refugia Survey	25 May 2013	21 June 2013	7	No reptiles found	CFA22	Within land required
030_RE_186002	Fradley Business Centre, Wood End Lane, Fradley, Lichfield	SK 1407, 1243	Refugia Survey	29 May 2013	24 June 2013	7	No reptiles found	CFA22	Within land required
030_RE_185001	Fradley Business Centre Wood End Lane, Fradley, Lichfield	SK 14588 11601	Refugia Survey	03 June 2013	27 June 2013	7	No reptiles found	CFA22	Within land required

## CFA16 Ladbroke and Southam

- 3.4.6 The land required for the construction of the Proposed Scheme within the Ladbroke and Southam study area is predominantly farmland with arable fields and pasture land. Suitable habitats for reptiles are in small pockets of set aside grassland, ponds, and patches of scrub and woodland edges. Overall the majority of the land required for the construction of the Proposed Scheme is unlikely to support a large or widespread population of common reptile species, although the hedgerow boundaries along many of the fields provide some foraging and commuting habitat for common reptile species especially where wide, rough field margins are present.
- 3.4.7 Two locations were surveyed for reptiles in the study area; one was found to support a low population size class of grass snake and adder, and the other a medium population size class of grass snake.
- 3.4.8 The habitats around the highways drainage pond adjacent to Gaydon Road, Southam was one of only two locations found during surveys within CFA16 to CFA22 supporting more than a low population size class of grass snake (the other was within the study area for the Curdworth to Middleton area (CFA20)).
- 3.4.9 No relevant records of reptiles were provided by Warwickshire Biological Records Centre within the land required for the construction of the Proposed Scheme within the area.
- 3.4.10 The only records of grass snake within 1km are at two locations: Hall Farm, west of the land required for the construction of the Proposed Scheme, and mentioned within the citation for Print Wood LWS. Print Wood LWS is approximately over 300m east of the land required for the construction of the Proposed Scheme; intervening habitat comprises only small lanes and arable fields with associated boundaries and no significant barriers to dispersal of reptiles from this site and the land required for the construction of the Proposed Scheme. The most obvious link for reptiles between Print Wood LWS and the land required for the construction of the Proposed Scheme are the habitats along Ridgeway Lane (an access track) along which the Centenary Way runs. This habitat link leads toward the Grand Union Canal (in the Ladbroke and Southam area (CFA17)) and the woodland and hedgerow habitats which run alongside the canal.
- 3.4.11 Grass snake populations within this area are likely to be common but restricted to suitable habitat which includes habitats within and adjacent to watercourses such as the Oxford Canal, the River Itchen and the Grand Union Canal.
- 3.4.12 During discussions with the Warwickshire County Recorder for reptiles, it is understood that adder was thought to be almost extinct within the county. There have been county surveys for adder at 18 sites in the last three years but only three of these sites are now thought to have potential for adders, namely at Kenilworth Common, Sutton Park and Kineton<sup>25</sup>. Only one of these sites is close to the land required for construction of the Proposed Scheme between CFA16 and 22 inclusive; within the Stoneleigh, Kenilworth and Burton Green area (CFA18). Anecdotal evidence would suggest a continued decline in the county which mirrors a national

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<sup>25</sup> Warwickshire BAP Adder Species Action Plan Progress Report 2011-2007.

decline<sup>26</sup>. The adder is therefore considered to be of rare occurrence in the county although this may be due, in part, to limited survey effort.

3.4.13 There is a breeding population of adder near Windmill Hill Spinney at Ladbroke Hill Farm (one juvenile was recorded). The adder were found on a field margin close to a mix of woodland and scrub habitats on a steep ridge with south-facing slopes and some open grassy field margins linked by mature hedgerows and is partially within and directly adjacent to the land required for the construction of the Proposed Scheme .

3.4.14 Due to the limited areas of survey and as the study area is also well within the known range of common lizard and slow worm it is possible that all of four common reptile species could be present within suitable habitat but probably in low numbers.

### **CFA17 Offchurch and Cubbington**

3.4.15 Suitable habitats for reptiles are likely to be in small pockets of set aside grassland, ponds, and patches of scrub and woodland edges. The hedgerow boundaries of many of the fields are likely to provide connective habitats linking small populations and provide some small level of suitable habitat for foraging and commuting especially where wide field margins are present. The majority of the land within this area is close grazed pasture and arable, which is unlikely to support a large or widespread population of any common reptile species. Obvious areas of suitable habitat for reptiles are limited within this area, determined from aerial photographs and available Phase 1 habitat data.

3.4.16 No reptile surveys were carried out within this area in 2012 due to access restrictions. Only one survey site was carried out in 2013 between the woodland at Ash Beds and the River Leam at which was found a low population size class of grass snake.

3.4.17 One record of grass snake from Warwickshire Biological Records Centre was identified along Welsh Road near the Grand Union Canal, outside the land required for the construction of the Proposed Scheme. This is consistent with the records of grass snake within Print Wood LWS and connective habitat along Centenary Way which joins Welsh Road (see CFA16 Ladbroke and Southam).

3.4.18 No records of grass snake or common lizard were located within 1km of the Land required for the construction of the Proposed Scheme in this area and there appears to be no direct connective habitat between any records beyond 1 km and the land required for the construction of the Proposed Scheme.

3.4.19 Given the known distribution of adder within Warwickshire (see CFA16 Ladbroke and Southam) and the preferred habitat types of this species it is unlikely that adder would be present.

### **CFA18 Stoneleigh, Kenilworth and Burton Green**

3.4.20 Overall the majority of the agricultural land within this area, being close grazed pasture and arable fields, is unlikely to support a large or widespread population of

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<sup>26</sup> Baker, J, Suckling, J. & Carey, R. (2004), *Status of the adder Vipera berus and slow-worm Anguis fragilis in England*. English Nature Research Report No. 546. Peterborough: English Nature.

common reptile species although there is potential for several small populations in areas linked by connective hedgerow and woodland habitat.

- 3.4.21 Five areas were surveyed for reptiles in this area and only low population size classes of grass snake were recorded. Desk study records of all four common reptile species (grass snake, common lizard, slow worm and adder) were identified within 1km of the land required for the construction of the Proposed Scheme, but the majority of these are outside of the land required.
- 3.4.22 The reptile habitat assessment within Stoneleigh Park near Gilbert's Spinney indicated that habitat is present with good potential for all common reptile species in grass, shrubs, scrub, trees and woodland areas. The area is noted as having potential to support egg laying and hibernation habitat as well as having a good level of sun exposure, prey availability and connectivity to the wider area. Grass snake was found in Stoneleigh Park in 2013 during surveys to support the assessment. A grass snake record from 2004 was provided from Stoneleigh Park near Gilbert's Spinney adjacent to the River Avon, in the same area as the grass snake recorded during surveys.
- 3.4.23 As well as grass snake being identified at Roughknowles Wood (030-RE-143001) during reptile surveys in 2013, grass snakes (two) were identified within the woodland incidentally during a dormouse survey.
- 3.4.24 The reptile habitat assessment for Black Waste Wood (030-RE-146001) identified good habitat for common lizard, slow worm and adder within small clearings within the broad leaved woodland. Habitat connectivity to the surrounding areas was noted as being good with the Kenilworth Greenway (disused railway) and hedgerow field margins being present although the suitable habitat for reptiles was limited in area due to heavy shading by the broad leaved woodland. However, no reptiles were recorded.
- 3.4.25 Although there are historic records of adder at Crackley Wood and Wainbody Wood, the most recent records were in 1964 and 1982 respectively. There have been county surveys for adder at 18 sites in the last three years but only three of these sites are now thought to have potential for adders<sup>27</sup>, none of which are within the study area. The closest of the three sites is Kenilworth Common LNR, approximately 500 m from the land required for construction of the Proposed Scheme), with the most recent adder record occurring in 1998. Slow worm and grass snake were also recorded in Kenilworth Common as recently as 2010. Kenilworth Common LNR is connected to the land required for the construction of the Proposed Scheme via the main line railway ( which also passes through Wainbody Wood), via habitats along Finham Brook and via the Kenilworth Greenway (which runs adjacent to Crackley Wood).
- 3.4.26 Wainbody Wood LWS also has historical records of grass snake present up to 1991. Reptiles could move between Wainbody Wood and Kenilworth Common/Kenilworth Greenway via road verges but the connectivity is limited. A grass snake record (2011) is located within a pond at the back of a residential property along the A429 Kenilworth Road close to where the Canley Brook passes beneath the A429 Kenilworth Road. This record is immediately adjacent to the land required for the

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<sup>27</sup> Warwickshire and Solihull Biodiversity Action Plan (BAP) Adder Species Action Plan Progress Report 2011-2007).



construction of the Proposed Scheme. However, this location was ruled out of having potential to support a reptile population at the scoping (Phase 1 habitat survey) stage.

- 3.4.27 Given the habitats within this area it is possible that there are low numbers of common reptiles (grass snake, slow worm and common lizard) particularly associated with woodland and watercourses using a wide range of connected habitats between Stoneleigh Park and Burton Green.
- 3.4.28 Given the known recent distribution of adder within this area, the preferred habitat types of this species and its recent decline, it is likely that, if adder were present, the population would be restricted to suitable open habitats linked to Kenilworth Common. The canopy of much of the other connected woodland habitat is likely to be too closed for adder and without the preferred mix of habitat and soil types.

### **CFA19 Coleshill Junction**

- 3.4.29 There is limited suitable habitat for reptiles within this area. The land within this area is already heavily fragmented by existing motorway networks (M6, M42 and M42 link road) and, outside of the motorway corridor; the land is dominated by urban development. Within the area surrounded by motorways (the Coleshill Estate) the majority of the land is close grazed pasture and arable fields which are unlikely to support a large or widespread population of any common reptile species. However there is potential for small populations in areas linked by connective hedgerow and woodland habitat. Suitable habitats for reptiles in the area are likely to be in areas of rough grassland, set aside grassland, ponds, patches of scrub and embankments of roads, railways and river corridors.
- 3.4.30 Four areas were surveyed for reptiles in this area but no reptiles were recorded.
- 3.4.31 The habitat assessment at land north of Watton Lane, Water Orton (030-RE-164001) within the land required for construction of the proposed scheme, indicated that the habitat was potentially good for the common reptile species common lizard and slow worm, although the habitats are isolated. Suitable habitats noted included bare ground, grass and tall ruderals with potential for refugia and hibernation noted in wood and earth mounds. Exposed south facing banks were also noted. Habitat connectivity to this site was noted as being good due to an adjacent operational railway corridor. Hibernation and egg laying habitat were noted as being limited.
- 3.4.32 The habitat assessment for Coleshill Sewage Treatment Works (030-RE-164002) within and immediately adjacent to the land required for the construction of the Proposed Scheme, indicated that the habitat was potentially good for common lizard, slow worm and grass snake with short grassland and tall ruderals being present along with bare areas suitable for basking and some shrubs providing cover. Prey availability on the habitat was good, with occasional rubble piles providing possible refugia although suitable egg laying habitat for grass snakes is limited. A dead grass snake was found on site during the Phase 1 habitat survey. A low population of grass snakes has since been recorded at this site. Due to varied management of this site, being within an operational sewage treatment works, two areas were assessed as suitable in 2013 whereas only one was assessed as suitable in 2012.
- 3.4.33 A further site at the Old Saltleians Rugby Club (030-RE-163001), within the land required for the construction of the Proposed Scheme, was recorded as having good

potential to support reptiles. The habitat assessment identified good but isolated habitat in rubble piles, hedgerows and a strip of rough grassland in the grounds of a rugby club, no reptiles were found during surveys.

- 3.4.34 There were very few records of reptiles within the study area provided by Warwickshire Biological Records Centre. There were only a few scattered records of grass snake provided by the Birmingham and Black Country Biological Records Centre; two grass snake records within 5 km of the land required for the construction of the Proposed Scheme and no records of slow worm or adder (Birmingham ECORE data covers the land within CFA24 and 25 which are adjacent to CFA19).
- 3.4.35 Due to grass snake being recorded within the Coleshill Junction study area and the area being well within the known range of common lizard, and slow worm it is possible that these common reptile species are present within the area. Given the known distribution of adder within Warwickshire and the preferred habitat types of this species it is unlikely that adder would be present.
- 3.4.36 The population of reptiles appears likely to be patchy with no good or exceptional populations identified to date and only limited and isolated patches of suitable habitat identified.

#### **CFA20 Curdworth to Middleton**

- 3.4.37 The habitat within the land required for the construction of the Proposed Scheme appears to be typical for the local area with the majority of the land being farmland with arable and pasture fields present largely divided by hedgerows. The majority of the land, being close grazed pasture and arable fields, is not considered to support a large or widespread population of any common reptile species although there is potential for several small populations in areas linked by connective hedgerow and woodland habitat. Suitable habitats for reptiles in the area are likely to be in these small pockets of habitat where there are features such as set aside grassland, ponds and patches of scrub.
- 3.4.38 Notable exceptions to this are Middleton Hall Farm Quarry, areas of woodland near Cuttle Mill Fisheries and other locations which include: semi-improved grassland, wet grassland, open water and stream.
- 3.4.39 Reptile surveys were undertaken at four locations within the study area. These areas mainly support grassland, with other inter-connecting habitats and features such as rubble piles providing suitable habitat mosaics for use by a range of species. Grass snake, common lizard and slow worm were recorded at low population size classes, apart from within plantation woodland near Marston Lane Bridge where a high population size class of grass snake was recorded from a maximum count of three due to the very small size of the survey site.
- 3.4.40 The nearest desk study records are grass snake (2009) and slow worm (1992) at Whitacre Heath Nature Reserve approximately 300 m from the land required for the construction of the Proposed Scheme. Common lizards have also been recorded within the area over 1km from the land required for the construction of the Proposed Scheme.

- 3.4.41 Woodland within land around Middleton Hall Farm Quarry (030-RE-171003) was assessed as good quality habitat for all common species of reptiles. A wide hedgerow with arable fields either side which contains a number of oak and hazel coppice stools with gaps for refuge, and open grassland patches for basking and connects to vegetated ditches, a pond and a scrubby grassland area with compost piles at land north of Church Lane (030-RE-171001) was also assessed as being good habitat. These areas were accessible too late to conduct reptile surveys.
- 3.4.42 A stream with vegetated banks at land off Tuppenhurst Lane (030-RE-171002) was assessed as poor habitat for a population of reptiles but was noted for its potential for commuting or foraging reptiles.
- 3.4.43 The population of reptiles appears likely to be patchy with the only high population being located at a very small site where a maximum count of three grass snakes resulted in a high population size class, and only limited and isolated patches of suitable habitat identified along the proposed scheme.

#### **CFA21 Drayton Basset, Hints and Weeford**

- 3.4.44 The land required for construction of the Proposed Scheme in this area is largely arable land with little value to reptiles. Suitable habitats for reptiles within the extent of the Proposed Scheme are in areas of rough grassland such as those located along embankments of roads such as the A5.
- 3.4.45 Only one site was surveyed for reptiles within this area, and no reptiles were found.
- 3.4.46 The reptile habitat assessment for land off Flat's Lane in Weeford (030-RE-178001) indicated that there was good habitat present for reptiles in rough grassland areas beneath young plantation woodland on the A5 embankment. Although flat itself, this habitat has direct links to good south facing basking habitat on adjacent highways land. Note was also made of marshy vegetation around a pond and hedgerows providing potential refuge opportunities for common reptiles species including grass snake.
- 3.4.47 Records from Staffordshire Biological Record Centre included all four of the widespread reptile species, and were focussed around the Tamworth area; none of these records are within the land required for the construction of the Proposed Scheme. The nearest record was of a common lizard recorded in 2007, approximately 330m from the land required for the construction of the Proposed Scheme, south-east of Whittington Heath Golf Course. The nearest adder record was located over 1 km east of the land required for the construction of the Proposed Scheme.
- 3.4.48 No LWS specifically mention reptiles in their descriptions. However, Snake's Hill and River Oxbow, Black Brook SBI contains a mixed river, woodland and grassland/marsh which may have potential to support reptiles, particularly grass snake, this site lies directly adjacent to the land required for the construction of the Proposed Scheme. The Black-Bourne Brook to the east and west of the Proposed Scheme also supports a mix of habitats which may be used by reptiles for commuting, foraging or refuge.
- 3.4.49 Hopwas Hayes Wood ancient semi-natural woodland, approximately 1.5km east of the land required for the construction of the Proposed Scheme, has several reptile

records including all four common reptile species although the adder record is from 1965.

- 3.4.50 Only four records of adder were supplied within the SER data within 5 km of the Land required for the construction of the Proposed Scheme within Staffordshire; all of these records were associated with Hopwas Hayes Wood or connected woodland habitats to the north of the A5. Although adder could be under-recorded within the area, as there are no records and no specific habitat considered suitable to support the species within the majority of the land required, it is anticipated that adder are restricted in distribution to habitat contiguous with Hopwas Hayes Wood and are not widely dispersed throughout this area. It is possible that grass snake, slow worm and common lizard are more widely present in suitable habitat within the land required for the construction of the Proposed Scheme.
- 3.4.51 The population of reptiles appears likely to be patchy with no good or exceptional populations identified and only limited and isolated patches of suitable habitat identified.

### **CFA22 Whittington to Handsacre**

- 3.4.52 The study area is largely farmland with arable and pasture fields divided by hedgerows. Overall the majority of the land, being close grazed pasture and arable fields, is not considered suitable to support a large or widespread population of common reptile species although there is potential for several small populations in areas linked by connective hedgerow and woodland habitat. Specifically the areas surveyed around Fradley Business Park and plantation and semi-natural broad leaved woodland around Black Slough and Ravenshaw Woods; no reptiles were found in these locations.
- 3.4.53 Surveys were carried out at eight sites. Despite good access in this area only one site was found to support a population of reptiles; Whittington Heath Golf Course which supported a low population size class of common lizard. The management at Whittington Heath Golf Course has been noted as not conducive to encouraging reptile populations due to intensive mowing regimes.
- 3.4.54 No reptile desk study records were identified within the land required for the construction of the Proposed Scheme. The nearest records are grass snake (2009) 510m from the land required and slow worm (1992) approximately 615m from the land required. Common lizards are also recorded over 1km from the land required.
- 3.4.55 None of the LWS in this area were designated for their reptile interest and none appeared to consist of habitats of potential high quality for reptiles.
- 3.4.56 The land required for the construction of the Proposed Scheme passes through or adjacent to two areas which have appeared to have been previously used for reptile mitigation for other development schemes. These are at Fradley Park (030-185001) which has a south facing grass bund and artificial reptile hibernacula in two set-aside fields, and East Hill Business Park (030-186001) grassland, scrub and woodland with artificial reptile hibernacula nearby. No reptile records were returned from the surveys on either of these two sites.

## 4 Breeding birds

### 4.1 Introduction

- 4.1.1 This section of the appendix presents details of baseline information relating to breeding birds for the section of the Proposed Scheme that will pass through CFA16 to CFA22 inclusive.

### 4.2 Methodology

- 4.2.1 Details of the standard methodology utilised for breeding bird surveys are provided in Ecology technical note: Ecological field survey methods and standards (Volume 5: Appendix CT-001-000/2).
- 4.2.2 Desk study records relating to breeding birds were obtained from the following sources:
- Warwickshire Biological Record Centre. Species records were only received for barn owl;
  - Staffordshire Ecological Record;
  - EcoRecord (the ecological database for Birmingham and the Black Country);
  - Banbury Ornithological Society;
  - West Midlands Bird Club 2009 Annual Report<sup>28</sup>;
  - The Barn Owl Trust; and
  - Information from local wildlife recorders during meetings arranged by Warwickshire County Council and Warwickshire Wildlife Trust in June and November 2012.
- 4.2.3 Bird records were available from Warwickshire Biological Record Centre, Staffordshire Biological Ecological Records Centre, EcoRecord, and from Banbury Ornithological Society for 10km from the route of the Proposed Scheme.
- 4.2.4 Table 43 provides a summary of all sites surveyed for breeding birds in CFA16 to CFA22 inclusive.

Table 43: Summary of all sites at which breeding birds were surveyed within CFA16 to CFA22 inclusive

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-117001	Oxford Canal	SP415625	Canal	26 March 2013 17 April 2013 07 May 2013 28 May 2013 18 June 2013	CFA16

<sup>28</sup> West Midland Bird Club (2011), The bird of Staffordshire, Warwickshire, Worcestershire and the West Midlands 2009: Annual Report No. 76. West Midland Bird Club: Suffolk.

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-122002	Ladbroke Hill Farm, Southam	SP428592	Arable farmland	29 March 2013 19 April 2013 25 May 2013 08 June 2013 28 June 2013	CFA16
030-BB1-123003	Land near Harp Farm, north-east of Ladbroke	SP419598	Arable farmland	29 March 2013 20 April 2013 26 May 2013 07 June 2013 27 June 2013	CFA16
030-BB1-123004	Land at Harp Farm, north-east of Ladbroke	SP426597	Arable farmland	29 March 13 20 April 2013 26 May 2013 07 Jun 2013 27 June 13	CFA16
030-BB1-124005	Starbold Farm, south of Southam	SP412600	Arable farmland	18 April 2013 08 May 2013 05 June 2013 10 June 2013 27 June 2013	CFA16
030-BB1-124006	Land at Harp Farm, north-east of Ladbroke	SP421601	Arable farmland	29 March 2013 20 April 2013 26 May 2013 07 June 2013 27 June 2013	CFA16
030-BB1-124007	Transect between Southam and Starbold Farm	SP415625	Arable farmland	18 April 2013 08 May 2013 05 June 2013 10 June 2013 27 June 2013	CFA16
030-BB1-126008	Home Farm, Southam	SP398621	Grassland	19 March 2013 24 April 2013 15 May 2013 05 June 2013 26 June 2013	CFA16
030-BB1-126009	Transect to the west of Southam	SP402616	Transect through arable farmland	18 April 2013 08 May 2013 05 June 2013 10 June 2013 27 June 2013	CFA16
030-BB1-127010	Ufton and Long Itchington Woods	SP385625	Woodland	07 May 2013 21 May 2013 04 June 2013 04 July 2013 (only four visits due to delayed access)	CFA16

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Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-127011	Land near Stoney Thorpe Home Farm, Southam	SP365624	Pasture farmland	19 March 2013 24 April 2013 15 May 2013 04 June 2013 25 June 2013	CFA16
030-BB1-127012	Transect around Long Itchington and Ufton Woods, passing Bascote Lodge Farm and along the Grand Union Canal	SP385625	Canal	04 April 2013 25 April 2013 16 May 2013 06 June 2013 27 June 2013	CFA16
030-BB1-128013	Woodmeadow Farm, north-east of Ufton	SP394638	Arable farmland	19 March 2013 24 April 2013 15 May 2013 05 June 2013 26 June 2013	CFA16
030-BB1-132014	Fields Farm, to the north of Offchurch	SP363671	Arable farmland	27 March 2013 23 April 2013 14 May 2013 05 June 2013 26 June 2013	CFA17
030-BB1-135015	South Cubbington Wood, Cubbington	SP351689	Broad-leaved woodland	21 March 2013 07 April 2013 18 May 2013 20 June 2013 04 July 2013	CFA17
030-BB1-135016	South Cubbington Wood, Cubbington	SP350688	Broad-leaved woodland	21 March 2013 07 April 2013 18 May 2013 20 June 2013 04 July 2013	CFA17
030-BB1-135017	Transect running north from Cubbington towards Furzen Hill Farm	SP344687	Arable farmland	21 March 2013 07 April 2013 18 May 2013 20 June 2013 04 July 2013	CFA17
030-BB1-137018	Park Farm, Stareton	SP339708	Arable farmland	16 April 2013 07 May 2013 04 June 2013 09 June 2013 26 June 2013	CFA18
030-BB1-137019	Stoneleigh Park, south of Stoneleigh (surveyed in two sections)	SP325720	Grassland, pasture farmland and broad-leaved woodland	30 March 2013 30 April 2013 01 May 2013 21 May 2013 22 May 2013 29 May 2013 11 June 2013 12 June 2013 03 July 2013 04 July 2013	CFA18

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-141020	Milburn Grange, Kenilworth	SP305737	Arable farmland	28 March 2013 16 April 2013 08 May 2013 29 May 2013 19 June 2013	CFA18
030-BB1-142021	Cryfield Grange, between Crackley and Coventry	SP296744	Arable farmland	27 March 2013 17 April 2013 15 May 2013 05 June 2013 10 July 2013	CFA18
030-BB1-142022	Crackley Farm, between Crackley and Coventry	SP294739	Pasture farmland	26 March 2013 08 April 2013 11 May 2013 14 June 2013 25 June 2013	CFA18
030-BB1-142023	Part of Crackley Wood, between Crackley and Coventry	SP289742	Broad-leaved woodland	26 March 2013 08 April 2013 11 May 2013 28 May 2013 25 June 2013	CFA18
030-BB1-142024	Land around South Hurst Farm, including Broadwells Wood, to the south-west of Coventry	SP280751	Arable farmland and broad-leaved woodland	25 March 2013 19 April 2013 13 May 2013 29 May 2013 19 June 2013	CFA18
030-BB1-144025	Roughknowles Wood, southwest of Coventry	SP289751	Pasture farmland and broad-leaved woodland	26 March 2013 08 April 2013 11 May 2013 28 May 2013 25 June 2013	CFA18
030-BB1-162026	Grassland adjacent to River Cole and immediately west of Coleshill	SP193896	Pasture farmland	03 April 2013 19 April 2013 10 May 2013 31 May 2013 21 June 2013	CFA19
030-BB1-162027	Coleshill Manor Office Campus, west of Coleshill	SP185893	Pasture and arable farmland	05 April 2013 25 April 2013 17 May 2013 05 June 2013 27 June 2013	CFA19
030-BB1-163028	Grassland south of Water Orton	SP183906	Pasture farmland	03 April 2013 02 May 2013 17 May 2013 06 June 2013 21 June 2013	CFA19
030-BB1-163029	Arable field south of Water Orton	SP181906	Arable farmland	03 April 2013 02 May 2013 17 May 2013 06 June 2013 21 June 2013	CFA19



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Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-163030	Grass fields to the immediate north of Gilson Hall	SP190905	Pasture farmland	03 April 2013 02 May 2013 23 May 2013 17 May 2013 06 June 2013 21 June 2013	CFA19
030-BB1-163031	Arable fields at Attleboro Farm, south of Water Orton	SP178897	Arable farmland	28 May 2013 18 June 2013 04 July 2013 (only three visits due to delayed access)	CFA19
030-BB1-163032	Grass fields south of Water Orton	SP183903	Pasture farmland	02 May 2013 17 May 2013 06 June 2013 21 June 2013 (only four visits due to delayed access)	CFA19
030-BB1-163033	Grass playing fields to the north of Gilson Hall, Gilson	SP189909	Amenity grassland	03 April 2013 02 May 2013 17 May 2013 06 June 2013 21 June 2013	CFA19
030-BB1-164034	Coleshill Sewage Treatment Works, Coleshill Industrial Estate	SP192914	Sewage treatment works	03 April 2013 19 April 2013 10 May 2013 31 May 2013 21 June 2013	CFA19
030-BB1-166035	Dunton Hall, North-east of Curdworth	SP192933	Pasture farmland	26 March 2013 16 April 2013 19 May 2013 28 May 2013 19 June 2013	CFA20
030-BB1-167036	Lower Mill Plantation, to the west of Marston	SP192950	Arable farmland	26 March 2013 16 April 2013 19 May 2013 28 May 2013 19 June 2013	CFA20
030-BB1-167037	Area of plantation woodland off Marston Lane, to the west of Marston	SP194944	Broad-leaved woodland	26 March 2013 16 April 2013 19 May 2013 28 May 2013 19 June 2013	CFA20
030-BB1-167038	Mullensgrove Farm, to the north-east of Curdworth	SP193939	Farm house grounds and large pond	26 March 2013 16 April 2013 19 May 2013 28 May 2013 19 June 2013	CFA20

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-BB1-167039	Transect along the Birmingham and Fazeley Canal at Bodymoor Heath, through arable fields past Lower farm, up to Middleton Hall and including Middleton Pool SSSI	SP193965	Canal	05 April 2013 23 April 2013 09 May 2013 30 May 2013 20 June 2013	CFA20
030-BB1-168040	Cuttle Mill Fishery, west of Marston	SP190950	Fishing lakes and woodland	26 March 2013 16 April 2013 19 May 2013 28 May 2013 21 June 2013	CFA20
030-BB1-170041	Middleton Hall Farm Quarry, to the south-east of Middleton	SP188974	Quarry lake	05 April 2013 23 April 2013 09 May 2013 30 May 2013 20 June 2013	CFA20
030-BB1-170042	Park Gate Farm, east of Middleton	SP186985	wetland	05 April 2013 (only one visit due to access refusal)	CFA20
BB1-030-172044	Arable fields to the immediate north of Middleton	SP174985	Arable farmland	16 April 2013 14 May 2013 04 June 2013 16 July 2013	CFA20
BB1-030-172043	Brook Farm, to the north of Middleton	SP181992	Arable farmland	20 March 2013 (only one visit due to access refusal)	CFA21
BB1-030-174045	Hill Farm, to the west of Drayton Bassett	SK175010	Arable farmland	19 March 2013 09 April 2013 07 May 2013 28 May 2013 09 July 2013	CFA21
030-BB1-175046	Transect to the south of Hints, running north along Bangley Lane, past Great Bangley Farm and up to Fordway Farm	SP183936	Through arable farmland	20 March 2013 17 April 2013 08 May 2013 19 June 2013 03 July 2013	CFA21
030-BB1-176047	Arable fields to the south-east of Hints, includes Roundhill Wood	SP294524	Pasture farmland	21 March 2013 10 April 2013 01 May 2013 22 May 2013 13 June 2013	CFA21
BB1-030-177048	Bucks Head Farm, east of Weeford	SK152042	Arable and pasture farmland	21 March 2013 12 April 2013 03 May 2013 24 May 2013 14 June 2013	CFA21
BB1-030-179049	Packington Moor Farm	SK144066	Arable and pasture farmland	03 April 2013 01 May 2013 22 May 2013 26 June 2013 03 July 2013	CFA21

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Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
BB1-030-181050	Whittington Heath Golf Course, Whittington Heath	SK147076	Amenity grassland with pockets of woodland and heathland	02 April 2013 30 April 2013 16 May 2013 05 June 2013 20 June 2013	CFA22
BB1-030-182051	Arable fields to the west of Streethay	SK155080	Arable farmland	20 March 2013 17 April 2013 10 May 2013 31 May 2013 21 June 2013	CFA22
BB1-030-183052	Arable fields to the west of Streethay	SK151086	Arable farmland	20 March 2013 17 April 2013 10 May 2013 31 May 2013 21 June 2013	CFA22
030-BB1-184053	Coventry Canal	SK151096	Canal	02 April 2013 30 April 2013 16 May 2013 05 June 2013 20 June 2013	CFA22
BB1-030-186054	Fradley Business Park, South	SK140124	Industrial buildings and arable farmland	02 April 2013 30 April 2013 21 May 2013 25 June 2013 02 July 2013	CFA22
BB1-030-187055	Arable fields to the west of Fradley	SK133131	Arable farmland	20 March 2013 09 April 2013 30 April 2013 12 June 2013 12 June 2013	CFA22
BB1-030-187056	Fradley Wood, to the west of Fradley	SK137134	Broad-leaved woodland	20 March 2013 09 April 2013 30 April 2013 21 May 2013 12 June 2013	CFA22
BB1-030-188057	Arable habitat to the west of Fradley	SK132141	Arable farmland	20 March 2013 09 April 2013 30 April 2013 21 May 2013 12 June 2013	CFA22
BB1-030-188058	Ravenshaw Wood, Black Slough Wood and Black Slough Farm, west of Fradley	SK123137	Broad-leaved woodland	20 March 2013 11 April 2013 02 May 2013 23 May 2013 13 June 2013	CFA22
BB1-030-188059	Fradley Gorse, west of Fradley	SK133135	Broad-leaved woodland	20 March 2013 09 April 2013 30 April 2013 21 May 2013 12 June 2013	CFA22

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
BB1-030-189060	Arable fields to the south of King's Bromley Wharf Marina	SK114140	Arable farmland	01 April 2013 26 April 2013 17 May 2013 07 June 2013 28 June 2013	CFA22
BB1-030-190061	Arable fields to the immediate west of King's Bromley Wharf Marina	SK109144	Arable farmland	19 March 2013 11 April 2013 02 May 2013 23 May 2013 13 June 2013	CFA22
BB1-030-192062	Arable field to the immediate south of Handsacre	SK095151	Arable farmland	19 March 2013 11 April 2013 02 May 2013 23 May 2013 13 June 2013	CFA22

### Species-specific survey: barn owls

- 4.2.5 Barn owl is a Schedule 1 species<sup>29</sup>. The Proposed Scheme has the potential to affect barn owls by causing the loss or fragmentation of nesting, roosting or foraging habitats, the potential for causing disturbance during the construction period and the potential for collision by moving trains. Barn owls are at risk of collision because barn owls hunt low over the rough grassland habitats that are associated with road verges and railway embankments and are slow moving. Collision with trains has the potential to affect barn owl populations up to 1.5km from the railway line (Shawyer, 2011)<sup>30</sup>.
- 4.2.6 To assess the effect of the Proposed Scheme on barn owls, specific survey methodologies were carried out up to 1.5km from the route of the Proposed Scheme, where access allowed and habitats appeared suitable. The survey methodology was based on the Chartered Institute of Ecology and Environmental Assessment (CIEEM) guidance (Shawyer, 2011).
- 4.2.7 A total of 37 sites within CFA16 to CFA22 inclusive were considered to be potentially suitable for barn owls, based on their habitat types:
- Type 1 habitat – perfect for field voles (barn owls' main prey species), usually permanent unimproved or semi-improved grassland, rank and heterogeneous in appearance e.g. set-aside grassland, unmanaged fields, wasteland, ditches, riverbanks, field margins and road verges;
  - Type 2 habitat – sub-optimal to field voles, typically improved or semi-improved grassland with a homogenous sward and limited tussock structure, with little sign of a litter layer;
  - Type 3 habitat – poor for small mammals, improved grasslands with

<sup>29</sup> Specially protected or Schedule 1 birds receive full protection under the Wildlife and Countryside Act 1981 (as amended). In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

<sup>30</sup> Shawyer, C. R. (2011), Barn owl *Tyto alba* survey methodology and techniques for use in ecological assessment: Developing best practice in survey and reporting. IEEM, Winchester.

homogenous sward, no tussock structure and no litter, often mown closely short; and

- Other habitats – non-grassland habitats, such as arable fields and woodlands are generally of little or no value as a permanent foraging resource to barn owls.

Table 44: Sites surveyed and type of survey carried out for barn owl within CFA16 to CFA22 inclusive

Site reference	Investigative field survey	Vantage point survey	Nest site verification survey	Habitat type	CFA
030-BB3-001 Farm site to the east of Ladbroke	Y	N	N	Arable	CFA16
030-BB3-002 Farm site to the northeast of Ladbroke)	Y	N	N	Arable	CFA16
030-BB3-003 Farm site to the northeast of Ladbroke	Y	N	N	Arable	CFA16
030-BB3-004 Farm site located near Ufton	Y	N	N	Habitat Type 3	CFA16
030-BB3-005 Farm site located near Ufton	Y	N	N	Arable	CFA16
030-BB3-006 Farm site to the north of Offchurch	Y	Y	Y	Arable	CFA17
030-BB3-007 Farm site near Stareton	Y	Y	Y	Arable	CFA18
030-BB3-008 Farm site near Kenilworth	Y	Y	Y	Arable	CFA18
030-BB3-009 Farm site near Kenilworth	Y	N	N	Arable	CFA18
030-BB3-010 Farm site near Crackley)	Y	Y	Y	Arable	CFA18
030-BB3-011 Farm site near Crackley	Y	N	N	Arable	CFA18
030-BB3-012 Farm site near Burton Green	Y	N	N	Arable	CFA18
030-BB3-013 grass field to the west of Coleshill	Y	N	N	Type 3 grassland habitat	CFA19
030-BB3-014 grass fields to the west of Coleshill	Y	Y	N	Type 3 grassland and arable habitat	CFA19
030-BB3-015 fields near Gilson	Y	N	Y	Type 2 grassland habitat	CFA19
030-BB3-016 Farm site to the south of Water Orton	Y	N	N	Type 2 grassland habitat	CFA19
030-BB3-017 Grass fields to the south of Water Orton	Y	Y	Y	Type 2 grassland habitat	CFA19
030-BB3-018 fields near Gilson	Y	N	N	Type 3 grassland habitat	CFA19
030-BB3-019 Farm site near Curdworth	Y	Y	Y	Type 2 grassland habitat	CFA20
030-BB3-020 Farm site near Marston	Y	N	N	Arable	CFA20

Site reference	Investigative field survey	Vantage point survey	Nest site verification survey	Habitat type	CFA
030-BB3-021 Grass area near Middleton	Y	Y	N	Type 2 grassland habitat	CFA20
030-BB3-022 Farm site near Middleton	Y	N	N	Arable	CFA21
030-BB3-023 Farm site to the north of Middleton	Y	N	N	Type 3 grassland and arable habitat	CFA21
030-BB3-024 Farm site to the west of Drayton Bassett	Y	N	N	Type 3 grassland habitat	CFA21
030-BB3-025 Farm site near Tamworth	Y	Y	Y	Type 2 and Type 3 grassland habitat	CFA21
030-BB3-026 Fields near Hints	Y	N	N	Arable	CFA21
030-BB3-027 Arable fields near Hints	Y	N	Y	Arable	CFA21
030-BB3-028 Farm site near Weeford	Y	Y	Y	Type 3 grassland habitat and arable	CFA21
030-BB3-029 Farm site to the south of Whittington Heath	Y	Y	Y	Type 3 grassland habitat and arable	CFA21
030-BB3-30 Arable fields west of Streethay	Y	N	N	Arable	CFA22
030-BB3-31 Arable fields west of Streethay	Y	N	N	Arable	CFA22
030-BB3-032 Grass and arable fields near Fradley	Y	N	N	Type 3 and arable habitat	CFA22
030-BB3-033 Arable fields to west of Fradley	Y	Y	N	Arable habitat	CFA22
030-BB3-034 Arable fields to the south of Handsacre	Y	N	N	Arable habitat	CFA22
030-BB3-035 Grass fields to the south of Handsacre Marina	Y	Y	Y	Type 2 grassland habitat	CFA22
030-BB3-036 Arable field to the south of Handsacre	Y	N	N	Arable	CFA22
030-BB3-037 Farm site near Streethay	Y	N	N	Arable	CFA22

## Evaluation

- 4.2.8 Territory analysis is by the standard Common Bird Census (CBC) approach described by Marchant (1983)<sup>31</sup>. Territory analysis has been undertaken for key species (breeding species whose maximum counts were of potential county/metropolitan value) but was not considered necessary for the common and widespread species even where they are listed as a Bird of Conservation Concern (BoCC)<sup>32</sup>. Notable species breeding territories are shown in Volume 5: Map Book – Ecology, Maps EC-o8.

<sup>31</sup> Marchant (1983), *Common bird census techniques*. BTO: Tring.

<sup>32</sup> Eaton MA, Brown AF, Noble DG, Musgrove AJ, Hearn R, Aebischer NJ, Gibbons DW, Evans A and Gregory RD (2009), *Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and the Isle of Man*. British Birds 102, pp296-341.

4.2.9 The key species for which territory analysis were undertaken are listed as follows. Breeding statuses are taken from the West Midland Bird Club 2009 report<sup>33</sup>:

- barn owl (frequent resident);
- corn bunting (fairly common resident);
- grey partridge (fairly common resident);
- hobby (uncommon summer resident);
- kingfisher (fairly common resident);
- lapwing (fairly common to common breeding species);
- lesser spotted woodpecker (frequent to fairly common resident);
- little ringed plover (frequent summer resident);
- marsh tit (fairly common resident);
- oystercatcher (uncommon breeding species);
- sand martin (fairly common summer resident);
- spotted flycatcher (fairly common summer resident);
- tree sparrow (fairly common resident); and
- yellow wagtail (fairly common summer resident).

4.2.10 For other species, breeding has not been confirmed and breeding status is based on professional judgement. Therefore if a species is thought to have bred on site due to: displaying breeding behaviour, the presence of suitable habitat and the species concerned having a relatively small territory size, then it is recorded as 'likely breeding'; for example, the presence of a singing song thrush in a woodland copse in the breeding season indicates likely breeding.

4.2.11 There are no standard processes for evaluating bird populations. On the basis of limited data collected over two seasons, and with the 2012 season being curtailed due to access restrictions, initial attempts at analysis confirm that it is not appropriate to apply any fixed criteria in a rigid way and assessments need to take into account professional judgement. However, the basis of bird evaluation for the assessment is outlined here:

- where a set of surveys clearly indicates that the assemblage of breeding birds at a site does not regularly include any notable species and the number and variety of birds is below that expected for such an area, it can be identified as having negligible value, but this would be by exception rather than as a rule;
- it is concluded that professional judgement is the only reasonable way to identify local/parish valuation of a bird population. Any population that includes a typical number of species for that habitat in the area in question

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<sup>33</sup> West Midland Bird Club (2011), *The birds of Staffordshire, Warwickshire, Worcestershire and the West Midlands 2009: Annual Report No. 76*. West Midland Bird Club: Suffolk.

should be considered to be of local/parish value. This evaluation would take into account the notable status of species;

- there is no easy way to identify a population or assemblage as being of district/borough value. However, where a population cannot clearly be shown to be of county/metropolitan value, but nevertheless is demonstrably of greater value than those identified as of local/parish value, it has been considered to be of district/borough value;
- if a population of birds at a site is at least 1% of the county population, based on available breeding population estimates for the county, then it is valued as being of county/metropolitan value. However, there are two caveats to this. Firstly, there are reasons to believe that county estimates are often very low for dispersed species such as woodcock and yellow wagtail. Hence the recent UK population estimates given in Musgrove et al (2013)<sup>34</sup> have also been taken into account when considering whether the published county estimate is likely to be a significant underestimate. This requires a degree of professional judgement. Secondly, the number of surveys that have been undertaken is low and covers one full breeding season only with limited access. Hence it is not realistically possible to determine whether the species that were recorded are/are not regularly present in the numbers recorded; and
- if a population at a site represents at least 1% of the national population of a species, based on national breeding population estimates (taken from Musgrove et al, 2013), then it is of national value.

4.2.12 Regional breeding status has been taken from the West Midland Bird Club 2009 report. The regional breeding status provides an approximate range of breeding territories. The lower limit of this range has been used to identify if a site potentially supports 1% of the county estimate. The following breeding status categories have been taken from the West Midland Bird Club 2009 report:

- Very rare                      fewer than 10 records ever;
- Rare                             breeding less than annually;
- Scarce                         10 pairs breeding;
- Uncommon                    10-50 pairs breeding;
- Frequent                      50-250 pairs breeding;
- Fairly common               250-2,500 pairs breeding;
- Common                      2,500-10,000 pairs breeding;
- Very common                10,000-25,000 pairs breeding; and
- Abundant                     25,000+ pairs breeding.

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<sup>34</sup> Musgrove, A., Aebischer, N.J., Eaton, M., Hearn, R., Newson, S., Noble, D., Parsons, M., Risely, K. & Stroud, D. (2013), Population estimates of birds in Great Britain and the United Kingdom. *British Birds*, 106: 64-100.



- 4.2.13 There are estimated to be between 50-250 pairs of barn owls breeding annually within the region of Staffordshire, Warwickshire, Worcestershire and the West Midlands, based on the 2009 bird report<sup>35</sup>, with records of up to 33 nest sites in Staffordshire and up to 37 sites in Warwickshire. Therefore it is considered that any breeding barn owl within CFAs16-22 inclusive is likely to constitute more than 1% of the county breeding population.
- 4.2.14 A bird species is considered as having notable status if it falls into one or more of the following:
- included in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended)<sup>36</sup>. In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest;
  - included on Annex 1 of the Habitats Directive<sup>37</sup>. This is the means by which the European Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). The main aim of the Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species listed on the Annexes to the Directive at a favourable conservation status, introducing robust protection for those habitats and species of European importance;
  - included on the red or amber list of Birds of Conservation Concern (BoCC) as defined in Gregory et al. (2002)<sup>38</sup>. The UK's leading bird conservation organisations have worked together on the third quantitative review of the status of the birds that occur regularly in the UK. Bird species have been assessed against a set of objective criteria to place each on one of three lists: green, amber and red, indicating an increasing level of conservation concern. The criteria used in assessments are intended to ensure that BoCC listings reflect each species' global and European status as well as that within the UK, and additionally measure the importance of the UK population in international terms; and
  - included on the list of species of principal importance (SPI) in England<sup>39</sup>.

## 4.3 Deviations, constraints and limitations

- 4.3.1 Access was limited to a number of land parcels within the land required for construction of the Proposed Scheme. However, it is estimated that approximately

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<sup>35</sup> West Midland Bird Club (2011), *The birds of Staffordshire, Warwickshire, Worcestershire and the West Midlands 2009: Annual Report No. 76*. West Midland Bird Club: Suffolk.

<sup>36</sup> *Her Majesty's Stationery Office*, London. Wildlife and Countryside Act 1981 (England and Wales)(as amended).Ch. 69.

<sup>37</sup> Species listed on Annex II of the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive). This is the means by which the European Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). In the UK the Directive has been transposed into national laws by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended) as consolidated by The Conservation of Habitats and Species Regulations 2010 (as amended – the Habitats Regulations). Annex II species are rare/threatened on a European level.

<sup>38</sup> Gregory RD, Wilkinson NI, Noble DG, Robinson JA, Brown AF, Hughes J, Proctor DA, Gibbons DW and Galbraith CA (2002), The population status of birds in the United Kingdom, Channel Islands and the Isle of Man; an analysis of conservation concern 2002-2007. *British Birds* 95: 410-450.

<sup>39</sup> Species of principal importance are identified in Section 41 of the *Natural Environment and Rural Communities (NERC) Act* (2006): Her Majesty's Stationery Office (2006). *Natural Environment and Rural Communities Act* (Chapter 16).

53% of the land along the route of the Proposed Scheme was surveyed, including a representative variety of habitats. The habitats within the land required for construction of the Proposed Scheme are considered to be fairly typical of the region, consisting mainly of arable and grass farmland, with pockets of woodland and some areas of water.

4.3.2 The very cold winter and unusually late spring has had an impact on the UK barn owl population and unofficial Barn Owl Trust figures show that very few pairs successfully managed to breed in 2013<sup>40</sup>. Therefore the survey data obtained in 2013 has been considered alongside historic breeding data.

4.3.3 Table 45 identifies those survey locations that were scoped as requiring breeding bird survey, but where access was not available in time for breeding bird surveys.

Table 45: Summary of locations where no access available for breeding bird survey within CFA16 to CFA22 inclusive

Survey site/location	OS grid reference	Description of proposed survey location and reason for identifying requirement for survey	CFA
Fish ponds near Lower Radbourne, southeast of Ladbroke	SP441570	Fish ponds with potential to attract birds	CFA16
Upper Radbourne Farm, southeast of Ladbroke	SP443580	Arable farmland representative of typical farmland in the local area	CFA16
Ladbroke Grove Farm, Ladbroke	SP434583	Arable farmland representative of typical farmland in the local area and Ladbroke Fox Covert woods	CFA16
Burnt Heath Farm, east of Offchurch	SP374654	Arable farmland representative of typical farmland in the local area and Burnt Firs Reservoir	CFA16
Part of South Cubbington Wood, north-east of Cubbington	SP352685	Broad-leaved woodland within Proposed Scheme	CFA17
North Cubbington Wood, north-east of Cubbington	SP350693	Mainly coniferous woodland, just outside Proposed Scheme	CFA17
Middleton House Farm and North Wood, east of Sutton Coldfield	SP190956	Arable farmland representative of typical farmland in the local area and broad-leaved woodland within Proposed Scheme	CFA20
Hill Farm, Lichfield	SK145101	Mixture of arable and pasture farmland representative of typical farmland in the local area, includes Fulfen Wood	CFA22
Big Lyntus woodland, north of Curborough	SK131129	Broad-leaved woodland just outside Proposed Scheme	CFA22
Ashton Hays Farm, south of Handsacre	SK101146	Arable farmland representative of typical farmland in the local area, including Harvey's Rough broad-leaved coppice	CFA22

## 4.4 Baseline

### CFA16 Ladbroke and Southam

#### *Breeding bird field surveys*

4.4.1 Nine sites were surveyed within this area for breeding birds, totalling an area of approximately 355ha:

<sup>40</sup> Personal Communication with Barn Owl Trust representatives.

- 030-BB1-117001; 4.0ha (Oxford Canal);
- 030-BB1-122002; arable, 70.7ha (land at Ladbroke Hill Farm, east of Ladbroke, containing Windmill Hill Spinney);
- 030-BB1-123003, 030-BB1-123004 and 030-BB1-124006; arable (30.8ha) and grassland (22.1ha), (land at Harp Farm, north-east of Ladbroke);
- 030-BB1-124005 and 030-BB1-124007; arable 50.6ha (Starbold Farm, south of Southam and transect between Starbold farm and Southam);
- 030-WB1-126008 and 030-BB1-127011; grassland, 46.0ha (Stoney Thorpe Home Farm, east of Ufton);
- 030-BB1-126009; 3ha (transect to the west of Southam, running south from Stoney Thorpe Hall);
- 030-BB1-127010; 78.6ha woodland (Long Itchington and Ufton Woods);
- 030-BB1-127012; 26.4ha (transect around Long Itchington and Ufton Woods, passing Bascote Lodge Farm and along the Grand Union Canal); and
- 030-BB1-128013; arable 22.8ha (Woodmeadow Farm, north-east of Ufton).

4.4.2 A total of 87 species were recorded within the area during the 2013 breeding bird surveys, of which 47 are notable.

#### **030-BB1-117001 (Oxford Canal)**

4.4.3 Within this site, 63 species were recorded of which 30 species are notable. Eighteen notable species are thought to have bred on the site.

Table 46: Records of notable birds recorded within 030-BB1-117001 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	8	5	Likely breeding
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	4	2	Not breeding on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	10	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	6	1	Not breeding on site (winter record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	4	2	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	14	1	Breeding nearby
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	2	Breeding nearby

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Red kite	<i>Milvus milvus</i>	Schedule 1, Annex 1, Amber List BoCC	2	1	Not breeding on site
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	19	3	Not breeding on site
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	21	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	26	3	Likely breeding
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	5	1	Not breeding on site (winter record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	6	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	3	1	Not breeding (wintering and passage)
Grey Partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	1	1	Breeding nearby
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	19	5	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	9	2	Not breeding (winter record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	20	5	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	10	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	10	4	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Breeding nearby
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	7	4	Breeding nearby
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	5	Likely breeding
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	4	3	Possibly breeding
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	4	1	Not breeding (passage record)

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	19	3	Likely breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	15	5	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	8	2	Confirmed breeding (two confirmed territories, two probable/possible territories)

### 030-BB1-122002 (Ladbroke Hill Farm, east of Ladbroke, containing Windmill Hill Spinney)

4.4.4 Within this site, 54 species were recorded of which 30 species are notable. Seventeen notable species are thought to have bred on site.

Table 47: Records of notable birds recorded within 030-BB1-122002 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	6	1	Not breeding on site
Brambling	<i>Fringilla montifringilla</i>	Schedule 1	2	1	Not breeding
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	4	4	Likely breeding
Common gull	<i>Larus canus</i>	Amber List BoCC	2	1	Not breeding (wintering record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	7	4	Likely breeding
Crossbill	<i>Loxia curvirostra</i>	Schedule 1	2	1	Not breeding on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	8	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	16	2	Not breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	3	3	Likely breeding
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	3	1	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	2	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	2	1	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	9	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	26	5	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	6	2	Confirmed breeding (one confirmed territory)
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	26	1	Not breeding (wintering and passage)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Redstart	<i>Phoenicurus phoenicurus</i>	Amber List BoCC	1	1	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	39	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	4	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	4	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	8	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	1	1	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	13	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	7	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	19	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	4	1	Possibly breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	3	2	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	58	5	Likely breeding

**030-BB1-123003 , 030-BB1-123004 and 030-BB1-124006 (Harp Farm, north-east of Ladbroke)**

4.4.5 Within this site, 60 species were recorded of which 31 species are notable. Eighteen notable species are thought to have bred on site.

Table 48: Records of notable birds recorded within 030-BB1-123003, 030-BB1-123004 and 030-BB1-124006 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	3	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	6	5	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	13	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	9	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	20	2	Not breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	3	2	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	2	Likely breeding
Hobby	<i>Falco subbuteo</i>	Schedule 1	1	1	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	5	2	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	7	4	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	55	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	2	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	170	2	Not breeding (wintering and passage)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 5)	Breeding status on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	20	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	11	5	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	16	1	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	7	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	30	3	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	11	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	19	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	7	2	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	28	5	Confirmed breeding (one confirmed territory, two probable/possible territories)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	5	4	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	4	2	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	17	5	Likely breeding

#### **030-BB1-124005 and 030-BB1-124007 (Starbold Farm, south of Southam and transect between Starbold Farm and Southam)**

4.4.6 Within this site, 50 species were recorded of which 24 species are notable. Seventeen notable species are thought to have bred on site.



## Appendix EC-002-003 | Breeding birds

Table 49: Records of notable birds recorded within 030-BB1-124005 and 030-BB1-124007 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 5)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	5	4	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	12	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	18	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	2	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	3	2	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	50	5	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	6	2	Probably breeding (two probable/possible territories)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	34	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	12	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	1	Not breeding (wintering and passage)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	6	5	Likely breeding
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	2	1	Not breeding on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	6	4	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	6	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	7	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	5	5	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	3	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	10	4	Breeding nearby

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 5)	Breeding status on site
Swift	<i>Apus apus</i>	Amber List BoCC	5	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	2	1	Possibly breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	4	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	7	4	Confirmed breeding (one confirmed territory, two probable/possible territories)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	14	5	Likely breeding

### 030-BB1-126008 and 030-BB1-127011 (Stoney Thorpe Home Farm, east of Ufton)

4.4.7 Within this site, 54 species were recorded of which 23 species are notable. Thirteen notable species are thought to have bred on site.

Table 50: Records of notable birds recorded within 030-BB1-126008 and 030-BB1-127011 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	205	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	8	4	Likely breeding
Common gull	<i>Larus canus</i>	Amber List BoCC	2	1	Not breeding (wintering record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	4	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	6	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	80	1	Not breeding
Great black-backed gull	<i>Larus marinus</i>	Amber List BoCC	1	1	Not breeding on site
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	4	5	Likely breeding
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	30	1	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	5	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	140	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	13	2	Likely breeding
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	2	2	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	6	3	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	3	3	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	66	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	42	5	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	10	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	17	4	Breeding nearby
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	2	Likely breeding

### 030-BB1-126009 (transect to the west of Southam, running south from Stoney Thorpe Hall)

4.4.8 Within this site, 43 species were recorded of which 16 species are notable. Eleven notable species are thought to have bred on site.

Table 51: Records of notable birds recorded within 030-BB1-126009 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	2	4	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	4	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	2	2	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	1	1	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	1	Not breeding (wintering and passage)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	3	Likely breeding
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	6	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	10	2	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	10	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	3	Breeding nearby
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	1	1	Not breeding (passage record)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	4	Likely breeding

### 030-BB1-127010 (Long Itchington and Ufton Woods)

4.4.9 Within this site, 34 species were recorded of which 10 species are notable. Eight notable species are thought to have bred on site.

Table 52: Records of notable birds recorded within 030-BB1-127010 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	2	1	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	3	3	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Lesser spotted woodpecker	<i>Dendrocopos minor</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory)
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	2	2	Probably breeding (one probable/possible territory)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	3	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	10	4	Likely breeding
Spotted flycatcher	<i>Muscicapa striata</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory)
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	1	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	3	Likely breeding

### 030-BB1-127012 (transect around Long Itchington and Ufton Woods, passing Bascote Lodge Farm and along the Grand Union Canal)

4.4.10 Within this site, 57 species were recorded of which 25 species are notable. Eighteen notable species are thought to have bred on site.

Table 53: Records of notable birds recorded within 030-BB1-127012 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	10	5	Likely breeding
Common sandpiper	<i>Actitis hypoleucos</i>	Amber List BoCC	1	1	Not breeding (passage record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	9	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	8	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	1	1	Not breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	2	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	2	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	4	2	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	4	5	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	3	2	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	23	5	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory in Long Itchington and Ufton Woods)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	3	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	39	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	5	5	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	4	4	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	9	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	5	2	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	10	4	Breeding nearby
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	3	4	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	7	5	Likely breeding

#### 030-BB1-128013 (arable land at Woodmeadow Farm, north-east of Ufton)

4.4.11 Within this site, 45 species were recorded of which 17 species are notable. Eleven notable species are thought to have bred on site.

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Table 54. Records of notable birds recorded within 030-BB1-128013 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	40	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	8	4	Likely breeding
Cuckoo	<i>Cuculus canorus</i>	Red List BoCC, SPI	1	1	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	5	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	60	1	Not breeding
Great black-backed gull	<i>Larus marinus</i>	Amber List BoCC	1	1	Not breeding on site
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	3	Likely breeding
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	2	3	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	6	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	8	2	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	3	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	6	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	350	3	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	3	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	6	2	Breeding nearby
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	10	5	Likely breeding

### Barn owl field surveys

- 4.4.12 A Stage 3 survey for barn owls was carried out at five sites within this area as detailed in Table 44.
- 4.4.13 All five sites surveyed were considered either unsuitable for barn owl or had no evidence of use by barn owl. Therefore, no further surveys were carried out within the area.

### Desk study

- 4.4.14 There are two statutory sites within 5km of the route of the Proposed Scheme within this area which mention birds in their designation.

- 4.4.15 Ufton Fields SSSI and WWT Nature Reserve lie over 500m from the route of the Proposed Scheme and is a mosaic of grassland, marshes and pools noted for its flora, invertebrates and birdlife. Wetland breeding birds are listed on the citation include little grebe, snipe and water rail. This site is not within, or adjacent to, land required for construction of the Proposed Scheme. The route of the Proposed Scheme is in tunnel beneath Long Itchington and Ufton Woods SSSI. The SSSI is oak-hazel coppiced woodland, supporting a range of common woodland breeding bird species. No particularly sensitive or notable species were identified.
- 4.4.16 Records have been obtained from the Banbury Ornithological Society which provides some coverage of CFA16; as shown on Table 55.

Table 55: Notable species records from Banbury Ornithological society in CFA16

Species	Status	Number of records within 1km of the route
Arctic skua	Red List BoCC, SPI	1
Arctic tern	Annex 1, Amber List BoCC	1
Black-headed gull	Amber List BoCC	7
Brambling	Schedule 1	3
Black redstart	Schedule 1, Amber List BoCC	1
Kestrel	Amber List BoCC	1

- 4.4.17 Of the species recorded by the Banbury Ornithological Society, black-headed gull and kestrel are thought to potentially breed within the survey area, with the other species being wintering or passage records. These species were both recorded during the breeding bird surveys, although there was no evidence of black-headed gull breeding near the Proposed Scheme.

- 4.4.18 Eight barn owl records have been received from Warwickshire County Council within 1.5km of the route of the Proposed Scheme, as shown in Table 56.

Table 56: Barn owl records within 1.5km of the route of the Proposed Scheme received from Warwickshire County Council

Location	Details	Date	Distance from the route (m)
North side of A423	Seen on roadside post	Not specified	580m
Near river Itchen	In small old cattle shed, barn located on edge of planted flood meadow	Not specified	1470m
Manor Farm, Ladbroke	Evidence of roost in a barn building	Not specified	700m
Southam	Flying over grassland	Not specified	440m
Ufton Fields Nature Reserve	Three records, no details	One record is from 1992. The others are not specified	880m, 960m, 1140m
Long Itchington and Ufton Wood SSSI	No detail	Not specified	400m

- 4.4.19 Anecdotal information obtained from local recorders during a meeting with Warwickshire Wildlife Trust and Warwickshire County Council identified a barn owl nest site to the north of Wormleighton. This nest site falls within the land required for



the construction of the Proposed Scheme. Breeding tree sparrows have also been recorded in the general area.

4.4.20 There was also anecdotal information of turtle dove breeding in the local area and breeding long-eared owls at the fish ponds at Lower Radbourne. These are historic records and both species are no longer thought to breed in these areas. The fish ponds at Lower Radbourne are also thought to support good numbers of breeding reed warbler.

4.4.21 There is anecdotal information of breeding kingfisher on the River Itchen.

### *Discussion*

4.4.22 Breeding populations of notable species were recorded at all nine sites. Particularly notable bird populations were recorded for tree sparrow; yellow wagtail and lesser spotted woodpecker (see Table 57).

Table 57: Notable breeding populations recorded within CFA16

Species	Site	Number of confirmed territories	Number of probable/ possible territories	Estimated breeding population for West Midlands	Percentage of regional population
Yellow wagtail	030-BB1-117001 Oxford Canal	2	2	250-2,500	0.1-1.6%
Tree sparrow	BB1-030-123003, BB1-030-123004 and BB1-030-124006	1	3	250-2,500	0.1-1.6%
Yellow wagtail	BB1-030-124005 and BB1-030-124007 Starbold Farm, south of Southam	1	2	250-2,500	0.1-1.2%
Lesser-spotted woodpecker	030-BB1-127010 Long Itchington and Ufton Woods SSSI		1	50-250	0.4-2%

4.4.23 Up to four pairs of yellow wagtails were thought to breed along the Oxford Canal transect (030-BB1-117001) and up to three pairs of yellow wagtails were thought to breed at Starbold Farm (030-BB1-124005 and BB1-030-124007). Although only 65 pairs of yellow wagtails were recorded breeding within Warwickshire (based on the 2009 West Midland Bird Club Report), this species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing on specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of yellow wagtail territories recorded are likely to be less than 1% of the county population.

4.4.24 Up to four pairs of tree sparrow were thought to have bred at Harp Farm (BB1-030-123003, BB1-030-123004 and BB1-030-124006). The West Midland Bird Club reported confirmed breeding of colonies of around 10-15 pairs from 12 sites in Warwickshire. Tree sparrow colonies are well monitored, and even with the assumption of some under-recording, it is considered that approximately 250 breeding pairs of tree sparrows within Warwickshire (the lower end of the regional estimated breeding population) is a reasonable county estimate. Therefore the tree sparrow population at Harp Farm is likely to be greater than 1% the county population.

- 4.4.25 A lesser-spotted woodpecker was recorded within Ufton and Long Itchington Woods (030-BB1-127010) on a single survey visit. It is considered likely that this bird bred within the site, but was not recorded in earlier surveys, possibly due to delayed access preventing any surveys in March, when lesser-spotted woodpeckers tend to be most vocal. Only 27 pairs of lesser-spotted woodpeckers were recorded breeding within Warwickshire, as reported in the 2009 West Midland Bird Club Report. This species is notoriously elusive and is thought to have been under-recorded. However, it is likely that considerably less than 100 pairs of lesser-spotted woodpeckers breed within Warwickshire and that each pair constitutes more than 1% of the county population.
- 4.4.26 None of the sites surveyed for barn owl were found to be supporting barn owl populations and are not likely to be included in a current barn owls home range. However, the Warwickshire County Council provided eight records of barn owls within 1.5km of the route of the Proposed Scheme and anecdotal information obtained from local recorders identified a traditional barn owl nest site at a Farm, to the north of Wormleighton. Therefore barn owls are thought to occur within the vicinity of the land required for construction of the Proposed Scheme, even though they do not occur within the areas surveyed.

### CFA17 Offchurch and Cubbington

#### *Breeding bird field surveys*

- 4.4.27 Three sites were surveyed within the area for breeding birds, totalling an area of approximately 148.3ha:
- 030-BB1-132014: Arable, 129.5ha (Field's Farm, to the north of Offchurch);
  - 030-BB1-135015 and 030-BB1-135016: Woodland, 2.1ha (small pockets of woodland at South Cubbington Wood, east of Cubbington); and
  - 030-BB1-135017: 16.7ha (transect running north from Cubbington towards Furzen Hill Farm).
- 4.4.28 A total of 76 species were recorded within the area during the 2013 breeding bird surveys, of which 40 are notable.

#### **030-BB1-132014 (field's farm, to the north of Offchurch)**

- 4.4.29 Within this site, 66 species were recorded of which 34 species are notable. Twenty-one notable species are thought to have bred on site.

Table 58: Records of notable birds recorded within 030-BB1-132014 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	17	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	7	4	Likely breeding
Common sandpiper	<i>Actitis hypoleucos</i>	Amber List BoCC	1	1	Not breeding

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Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	34	4	Likely breeding
Cuckoo	<i>Cuculus canorus</i>	Red List BoCC, SPI	1	1	Breeding nearby
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	19	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	82	1	Not breeding (wintering record)
Golden plover	<i>Pluvialis apricaria</i>	Annex 1, Amber List BoCC	16	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	3	4	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	2	Probably breeding (one probable/possible territory)
House martin	<i>Delichon urbica</i>	Amber List BoCC	2	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	4	3	Breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	1	4	Confirmed breeding (one confirmed territory)
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	68	5	Confirmed breeding (three confirmed territories, one probable/possible territory)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	4	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	33	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	5	5	Breeding nearby
Merlin	<i>Falco columbarius</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Not breeding (wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Red kite	<i>Milvus milvus</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Not breeding on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	7	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	14	5	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	21	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	8	5	Likely breeding
Spotted flycatcher	<i>Muscicapa striata</i>	Red List BoCC, SPI	1	1	Possibly breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	62	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	12	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	14	4	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	5	3	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	1	1	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	4	4	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	5	2	Confirmed breeding (one confirmed territory, one probable/possible territory)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	42	5	Likely breeding

#### 030-BB1-135015 and 030-BB1-135016 (small pockets of woodland at South Cubbington Wood, east of Cubbington)

4.4.30 Within this site, 34 species were recorded of which 12 species are notable. Seven notable species are thought to have bred on site.

Table 59: Records of notable birds recorded within 030-BB1-135015 and 030-BB1-135016 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	1	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	3	2	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	5	4	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	55	1	Not breeding (wintering record)
Grey Wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	1	Likely breeding
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	3	1	Not breeding (wintering record)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	1	Breeding nearby
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	30	2	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	1	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	2	Likely breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding

### 030-BB1-135017 (transect running north from Cubbington towards Furzen Hill Farm)

4.4.31 Within this site, 55 species were recorded of which 27 species are notable. Fifteen notable species are thought to have bred on site.

Table 60: Records of notable birds recorded within 030-BB1-135017 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	17	2	Not breeding on site
Brambling	<i>Fringilla montifringilla</i>	Schedule 1	2	1	Not breeding (wintering record)
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	1	Likely breeding
Common gull	<i>Larus canus</i>	Amber List BoCC	1	1	Not breeding (wintering record)

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	13	3	Likely breeding
Cuckoo	<i>Cuculus canorus</i>	Red List BoCC, SPI	1	1	Breeding nearby
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	14	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	230	2	Not breeding (wintering record)
House martin	<i>Delichon urbica</i>	Amber List BoCC	19	2	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	30	5	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	4	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	24	5	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory)
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	4	2	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	2	Breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	45	2	Not breeding (winter record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, UK BAP	1	2	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, UK BAP	5	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, UK BAP	5	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, UK BAP	93	4	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	16	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	17	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	11	2	Not breeding on site

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Tree pipit	<i>Anthus trivialis</i>	Red List BoCC, UK BAP	2	1	Not breeding (passage record)
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, UK BAP	3	2	Probably breeding (two probable/possible territories)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, UK BAP	9	5	Likely breeding

### Barn owl field surveys

- 4.4.32 One site within the area underwent all stages of field survey for barn owls; 030-BB3-006, a farm site to the north of Offchurch. See Table 44 for details.
- 4.4.33 This site was of arable land use, which is generally considered to be of little value to barn owls due to the narrow field margins, potentially resulting in limited small mammal populations. However, the site provided evidence of use by barn owls in multiple features including a large ash tree and three barns. In each of these features barn owl pellets and faecal splashing provided evidence of use by barn owls.
- 4.4.34 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.35 During the vantage point surveys the barn owl was seen sitting in a hole in the ash tree, heard calling from the ash tree and seen hunting and foraging along the field boundaries around the ash tree (some of which lie within the land required for the construction of the Proposed Scheme). The barn owl was not seen to use the barns, although fresh pellet evidence suggests these are used as roost sites.
- 4.4.36 A nest site verification survey was then conducted at the ash tree, in which multiple signs of previous nesting were found, including pellets, feathers and nest debris. There were no signs (chicks or egg remnants) of this tree being used for nesting in spring 2013. However this is considered to be a traditional nest site.
- 4.4.37 A male quail was heard singing at the farm site to the north of Offchurch during a barn owl survey. Quail, a Schedule 1 species, is a small game bird which migrates to the UK for the summer. This bird was heard on a single occasion and was considered likely to be on passage rather than breeding on site.

### Desk study

- 4.4.38 There are no statutory sites within 5km of the route of the Proposed Scheme within the area which have been designated due to their bird populations.
- 4.4.39 There are seven non-statutory sites within 5km of the route of the Proposed Scheme within CFA17 which mention birds in their designation. Of these, South Cubbington

Wood falls within the land required for construction of the Proposed Scheme. However the designation for South Cubbington Wood only mentions historic records of nightingale from 1980 and this species appears to no longer breed in the area.

- 4.4.40 There are no records of barn owl within 1.5km of the route of the Proposed Scheme within this area.

### *Discussion*

- 4.4.41 Breeding populations of notable species were recorded at all three sites. However, a particularly notable breeding bird population of lapwing was recorded at Field's Farm (030-BB1-132014). Up to four pairs of lapwings were thought to breed within Field's Farm. The West Midland Bird Club reported 132 confirmed breeding territories within Warwickshire in 2009. Although there is likely to have been some under-recording, the breeding population at Field's Farm, is considered to be greater than 1% of the estimated county population.
- 4.4.42 The site surveyed for barn owl within this area (to the north of Offchurch) was found to be supporting barn owls. Although nesting was not recorded, evidence of a traditional nest site was recorded within an ash tree. The absence of breeding in spring 2013 is likely due to the unusually cold winter at the beginning of 2013, stretching through to the end of March. Because of this, barn owls have suffered with regards to breeding and raising viable young and many birds have remained unpaired. Although the nest site was not used for raising young this year, it will likely be used in future years<sup>41</sup>.
- 4.4.43 Due to limited access within this area the presence of additional barn owls within areas currently unsurveyed cannot be ruled out. Although Warwickshire County Council did not provide records of barn owls within 1.5km of the scheme, there are suitable potential foraging, nesting and roosting areas for barn owl in some of these unsurveyed areas.

## **CFA18 Stoneleigh, Kenilworth and Burton Green**

### *Breeding bird field surveys*

- 4.4.44 Eight sites were surveyed within CFA18 for breeding birds, totalling an area of approximately 677.9ha:
- 030-BB1-137018; arable, 74.5ha (Park Farm, Stareton);
  - 030-BB1-137019; grassland (219ha) and woodland (20ha), (Stoneleigh Park, south of Stoneleigh);
  - 030-BB1-141020; arable 74.5ha (Milburn Grange, Kenilworth);
  - 030-BB1-142021; arable, 90.5ha (Cryfield Grange, between Crackley and Coventry);
  - 030-BB1-142022; grassland, 33.8ha (Crackley Farm, between Crackley and

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<sup>41</sup> According to the Barn Owl Conservation Trust, barn owls generally choose to use the same roost and nest sites throughout their lives. When a home range is vacated for a period and then re-occupied, the new occupants will often choose the same nest and roost sites as the previous residents used (The Barn Owl Trust (2012), *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter). Due to 2013 having been a poor year for breeding barn owls, traditional nest sites that were unoccupied in 2013 are considered likely to be used in future years.



Coventry);

- 030-BB1-142023; woodland, 2.1ha (part of Crackley Wood, between Crackley and Coventry);
- 030-BB1-142024; arable and woodland, 153.8ha (land around South Hurst Farm, including Broadwells Wood, to the south-west of Coventry); and
- 030-BB1-144025; grassland (3.8ha) and woodland (5.9ha) (Roughknowles Wood, south-west of Coventry).

4.4.45 A total of 82 species were recorded within CFA18 during the 2013 breeding bird surveys, of which 40 are notable.

#### **030-BB1-137018 (Park Farm, Stareton)**

4.4.46 Within the site, 51 species were recorded of which 23 species are notable. Seventeen notable species were thought to have bred on site.

Table 61: Records of notable bird species recorded within 030-BB1-137018 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	2	1	Not breeding on site
Barn owl	<i>Tyto alba</i>	Schedule 1, Amber List BoCC	1	1	Confirmed breeding (one confirmed territory)
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	15	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	8	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	2	1	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	1	1	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	6	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	14	5	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	1	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	21	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	2	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	22	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	9	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	10	5	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	3	3	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	1	2	Probably breeding (one probable/possible territory)
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Not breeding on site
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	13	5	Confirmed breeding (two confirmed territories, two probable/possible territories)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	13	5	Likely breeding

### 030-BB1-138019 (Stoneleigh Park, south of Stoneleigh)

4.4.47 Within this site, 71 species were recorded of which 33 species are notable. Twenty-two notable species were thought to have bred on site.

Table 62: Records of notable bird species recorded within 030-BB1-138019 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	11	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	4	4	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	11	4	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	1	1	Possibly breeding

## Appendix EC-002-003 | Breeding birds

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	10	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	110	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	4	5	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	3	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	8	3	Not breeding on site
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	2	2	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	1	3	Possibly breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	1	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	2	2	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	6	4	Likely breeding
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	2	2	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	12	5	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	1	2	Possibly breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	3	3	Likely breeding
Redstart	<i>Phoenicurus phoenicurus</i>	Amber List BoCC	1	2	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	54	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	4	Likely breeding
S skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	6	5	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	11	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	21	4	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	8	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	22	4	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	25	3	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	5	1	Not breeding on site
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	12	4	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	3	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	3	4	Likely breeding

### 030-BB1-141020 (Milburn Grange, Kenilworth)

4.4.48 Within this site, 56 species were recorded of which 26 species are notable. Seventeen notable species were thought to have bred on site.

Table 63: Records of notable bird species recorded within 030-BB1-141020 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	14	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	11	4	Likely breeding
Cuckoo	<i>Cuculus canorus</i>	Red List BoCC, SPI	1	1	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	20	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	35	1	Not breeding (wintering record)

## Appendix EC-002-003 | Breeding birds

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	3	2	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	12	3	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	26	5	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Breeding nearby
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	4	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	15	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	8	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	17	1	Not breeding (passage/wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	1	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	23	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	9	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	15	4	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	30	4	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	2	1	Not breeding on site
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	2	3	Probably breeding (one probable/possible territory)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	16	5	Likely breeding

**030-BB1-142021 (Cryfield Grange, between Crackley and Coventry)**

4.4.49 Within this site, 45 species were recorded of which 19 species are notable. Thirteen notable species were thought to have bred on site.

Table 64: Records of notable bird species recorded within 030-BB1-142021 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Barn owl	<i>Tyto alba</i>	Schedule 1, Amber List BoCC	1	1	Not breeding
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	1	Likely breeding
Common gull	<i>Larus canus</i>	Amber List BoCC	2	1	Not breeding (wintering record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	9	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	10	4	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	80	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	2	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	2	Breeding nearby
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	64	4	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	3	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	1	2	Probably breeding (one probable/possible territory)
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	2	Not breeding (passage/wintering record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	60	1	Not breeding (wintering record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	5	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	6	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	82	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	2	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	13	5	Likely breeding

### 030-BB1-142022 (Crackley Farm, between Crackley and Coventry)

4.4.50 Within this site, 49 species were recorded of which 25 species are notable. Fifteen notable species were thought to have bred on site.

Table 65: Records of notable bird species recorded within 030-BB1-142022 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	1	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	9	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	11	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	11	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	3	Likely breeding
Greylag goose	<i>Anser anser</i>	Amber List BoCC	61 (feral population)	2	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	5	2	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	5	3	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	2	2	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	2	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	20	2	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	17	1	Not breeding (passage/wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	50	2	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	2	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	4	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	11	4	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	6	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	6	2	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	3	1	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	5	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	6	4	Likely breeding

### 030-BB1-142023 (part of Crackley Wood, between Crackley and Coventry)

4.4.51 Within this site, 25 species were recorded of which six species are notable. Three notable species were thought to have bred on site.

Table 66: Records of notable bird species recorded within 030-BB1-142023 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Duncock	<i>Prunella modularis</i>	Amber List BoCC, SPI	1	1	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	2	1	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	2	1	Not breeding (wintering record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	15	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	3	5	Likely breeding



Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	1	Likely breeding

### 030-BB1-142024 (South Hurst Farm, including Broadwell's Wood, to the south-west of Coventry)

4.4.52 Within this site, 51 species were recorded, of which 23 are notable. Seventeen notable species were thought to have bred on site.

Table 67: Records of notable bird species recorded within 030-BB1-142024 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	4	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	8	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	16	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	1	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	4	1	Not breeding on site
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	3	1	Breeding nearby
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	1	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	165	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	3	3	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	2	2	Probably breeding (one probable/possible territory)
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	2	Not breeding (passage/ wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	4	4	Likely breeding
Redstart	<i>Phoenicurus phoenicurus</i>	Amber List BoCC	2	1	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	15	1	Not breeding (wintering record)

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	4	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	35	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	26	3	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	7	4	Likely breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	3	2	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	5	4	Likely breeding

### 030-BB1-142025 (Roughknowles Wood, south-west of Coventry)

4.4.53 Within this site, 37 species were recorded, of which 11 are notable. Ten notable species were thought to have bred on site.

Table 68: Records of notable bird species recorded within 030-BB1-142025 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	2	2	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	1	2	Likely breeding
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	2	2	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	3	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	2	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Stock dove	<i>Columba oenas</i>	Amber List BoCC	3	2	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### *Barn owl field surveys*

4.4.54 Six sites within the area underwent various stages of field surveys for barn owls, detailed in Table 44.

#### **030-BB3-007 (farm site near Stareton)**

4.4.55 This site was of arable land use with narrow field margins. Within a small barn was a barn owl nest box, along with a large amount of barn owl pellets and faecal splashing on the floor, providing strong evidence of use by barn owls.

4.4.56 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.

4.4.57 During the vantage point surveys no barn owls were seen in or around the barn.

4.4.58 A nest site verification survey was conducted at the barn. On approach to the barn, a barn owl was flushed out and flew across the arable field to the south. During the inspection it was found that the nest box was not accessible to view inside. There was no conclusive evidence that this box was used for nesting in spring 2013. However, the large amount of barn owl pellets and faecal splashing on the floor suggests that the nest box is likely to be a traditional nest site.

4.4.59 A male quail was heard singing at 030-BB3-007 during a barn owl survey. Quails (notable for their Schedule 1 status) are a small game bird which migrates to UK for the summer. This bird was heard on a single occasion and was considered likely to be on passage rather than breeding on site.

#### **030-BB3-008 (farm site near Kenilworth)**

4.4.60 Although this site was arable land and would generally be considered of little value to barn owls due to the narrow field margins potentially resulting in limited small mammal populations, the site provided evidence of use by barn owls in three large oak trees. At each of the three trees a single old barn owl pellet was found at the base providing some evidence for occasional use by barn owls.

4.4.61 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls. During the vantage point surveys no barn owls were seen in or around the barn and no fresh evidence was found. After two vantage point surveys this area was considered only to be used by barn owls rarely and no further vantage point surveys were required.

**030-BB3-009 (farm site near Kenilworth)**

- 4.4.62 After an investigative field survey this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out.

**030-BB3-010 (farm site near Crackley)**

- 4.4.63 After an investigative field survey at this site, it was concluded that the area was not suitable for barn owl and no evidence was found. However, after a sighting of a barn owl during breeding bird survey, vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.64 During the vantage point surveys, no barn owls were seen at any point around the site. After two dusk/dawn vantage point surveys, a further nocturnal survey was conducted. No barn owls were seen and no fresh evidence was discovered, therefore this area was considered only to be used by barn owls rarely and no further vantage point surveys were required.
- 4.4.65 There were records of hobby within 030-BB3-010 during the barn owl surveys. A hobby was observed repeatedly calling at a site, without being mobbed, indicating probable breeding.
- 4.4.66 There were two records of kingfisher at 030-BB3-010 from the barn owl surveys. This included a sighting of a pair, indicating probable breeding.

**030-BB3-011 (farm site near Crackley)**

- 4.4.67 After an investigative field survey this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out.

**030-BB3-012 (farm site near Burton Green)**

- 4.4.68 After an investigative field survey, this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out.

*Desk study*

- 4.4.69 There are no statutory sites within 5km of the route of the Proposed Scheme within the area which have been designated due to their bird populations.
- 4.4.70 There are 16 non-statutory sites within 5km of the route of the Proposed Scheme which mention birds in their designation. Of these, Broadwells Wood LWS and Big Pools and Little Pools Wood LWS are within the land required for construction of the Proposed Scheme. These sites only have common woodland birds listed in their designation.
- 4.4.71 There are no records of barn owl within 1.5km of the route of the Proposed Scheme within the area.

*Discussion*

- 4.4.72 Breeding populations of notable species were recorded at all eight sites. However, particularly notable bird populations were recorded for barn owl; hobby and yellow wagtail (see Table 6g).

Table 6g: Particularly notable bird species breeding populations recorded within CFA18

Species	Site	Number of confirmed territories	Number of probable territories	Estimated breeding population for West Midlands	Percentage of regional population
Barn owl	030-BB3-007	1		50-250	0.4-2%
Yellow wagtail	030-BB1-137018	3	1	250-2,500	0.2-1.6%
Hobby	030-BB3-010		1	10-50	2-10%

- 4.4.73 Up to four pairs of yellow wagtails were thought to breed at 030-BB1-137018 (Park farm). Although only 65 pairs of yellow wagtails were recorded breeding within Warwickshire (based on the 2009 West Midland Bird Club Report), this species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing on specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of yellow wagtail territories recorded are likely to be less than 1% of the county population.
- 4.4.74 A pair of hobbies is thought to probably have bred within or very near to a site near Crackley (030-BB3-010). A total of 15 hobby breeding pairs were recorded breeding within Warwickshire in the most recent (2009) West Midland Bird Club Report. This species may have been under-recorded; however, one pair is still thought to be significantly greater than 1% of the county population.
- 4.4.75 A single pair of barn owls is considered to have bred or regularly breed within a farm near Kenilworth (030-BB3-007). A barn at this farm appears to provide an ideal nest site for barn owls; containing a box and being undisturbed. The evidence inside the barn suggests that this has been used as a nest site previously due to copious amount of pellets and splashing. Therefore, this area must be considered a traditional nest site for barn owls although nesting could not be confirmed this year<sup>42</sup>.
- 4.4.76 Due to limited access within this area the presence of additional barn owls within areas currently unsurveyed cannot be ruled out. Although the Warwickshire County Council did not provide records of barn owls within 1.5km of the scheme, there are suitable potential foraging, nesting and roosting areas for barn owl in some of these unsurveyed areas.

## CFA19 Coleshill Junction

### *Breeding bird field surveys*

- 4.4.77 Six sites were surveyed within CFA19 for breeding birds, totalling an area of approximately 260.1ha:
- 030-BB1-162026; grassland, 14.5ha (grass area adjacent to River Cole and immediately west of Coleshill);
  - 030-BB1-162027; grassland and arable, 79.2ha (Coleshill Manor Office Campus,

<sup>42</sup> According to the Barn Owl Conservation Trust, barn owls generally choose to use the same roost and nest sites throughout their lives. When a home range is vacated for a period and then re-occupied, the new occupants will often choose the same nest and roost sites as the previous residents used (The Barn Owl Trust (2012), *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter). Due to 2013 having been a poor year for breeding barn owls, traditional nest sites that were unoccupied in 2013 are considered likely to be used in future years.

west of Coleshill);

- 030-BB1-163028, 030-BB1-163029 and 030-BB1-163032; arable (6.4ha) and grassland (26,2ha), (fields south of Water Orton);
- 030-BB1-163030 and 030-BB1-163033; grassland, 26.3ha (grass fields to the north of Gilson Hall, Gilson);
- 030-BB1-163031; arable, 47.9ha (arable fields at Attleboro Farm, south of Water Orton); and
- 030-BB1-164034; sewage works, 59.6ha (Coleshill Sewage Treatment Works, Coleshill Industrial Estate).

4.4.78 A total of 82 species were recorded within the area during the 2013 breeding bird surveys, of which 42 are notable.

#### **030-BB1-162026 (grass area adjacent to River Cole and immediately west of Coleshill)**

4.4.79 Within this site, 38 species were recorded of which 18 species are notable. Thirteen notable species are thought to have bred on site.

Table 70: Records of notable bird species recorded within 030-BB1-162026 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	8	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	11	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	1	1	Not breeding (winter record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	2	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	1	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	5	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	2	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	78	1	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	6	1	Not breeding (winter record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	5	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	2	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	10	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	2	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	5	1	Breeding nearby
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### 030-BB1-162027 (Coleshill Manor Office Campus, west of Coleshill)

4.4.80 Within the site, 50 species were recorded of which 22 species are notable. Fourteen notable species are thought to have bred on site.

Table 71: Records of notable bird species recorded within 030-BB1-162027 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	6	4	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	8	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	9	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	6	4	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	8	5	Confirmed breeding (two confirmed territories, one probable/possible territory)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	5	1	Likely breeding
Little ringed plover	<i>Charadrius dubius</i>	Schedule 1	2	1	Not breeding (passage record)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	11	4	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	10	5	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	23	1	Not breeding (winter record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	4	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	4	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	2	1	Not breeding (winter record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	6	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	32	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	8	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	4	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	2	3	Not breeding on site
Tree pipit	<i>Anthus trivialis</i>	Red List BoCC, SPI	2	1	Not breeding (passage record)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	4	4	Likely breeding

**030-BB1-163028, 030-BB1-163029 and 030-BB1-163032; arable (6.4ha) and grassland (26,2ha) fields south of Water Orton**

4.4.81 Within the site, 56 species were recorded of which 28 species are notable. Fifteen notable species are thought to have bred on site.

Table 72: Records of notable bird species recorded within 030-BB1-163028, 030-BB1-163029 and 030-BB1-163032 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	3	10	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	3	4	Likely breeding
Common gull	<i>Larus canus</i>	Amber List BoCC	1	1	Not breeding (wintering record)



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Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	4	6	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	5	6	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	1	1	Not breeding (winter record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	1	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	5	12	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	2	1	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	3	3	Probably breeding (two probable/possible territories)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	4	3	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	1	1	Not breeding (winter record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	3	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	3	Breeding nearby
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	4 <sup>0</sup>	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	1	17	Not breeding (winter record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	1	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	1	4	Not breeding (winter record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	2	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	3	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	2	Breeding nearby

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Swift	<i>Apus apus</i>	Amber List BoCC	1	4	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	1	4	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	5	5	Likely breeding

### 030-BB1-163030 and 030-BB1-163033 (grass fields to the north of Gilson Hall, Gilson)

4.4.82 Within this site, 36 species were recorded of which 15 species are notable. Nine notable species are thought to have bred on site.

Table 73: Records of notable bird species recorded within 030-BB1-163030 and 030-BB1-163033 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	10	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	4	2	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	4	5	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	2	2	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	3	2	Not breeding on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	3	3	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	4	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	2	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	14	1	Not breeding (winter record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	14	5	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	6	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	2	2	Not breeding on site

### 030-BB1-163031 (arable fields at Attleboro Farm, south of Water Orton)

4.4.83 Within this site, 35 species were recorded of which 13 species are notable. Ten notable species are thought to have bred on site.

Table 74: Records of notable bird species recorded within 030-BB1-163031 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	11	3	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	1	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	1	1	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	4	1	Thought to breed just off site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	3	1	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	3	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	3	3	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	3	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	1	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	3	1	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	2	1	Not breeding on site
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	9	3	Likely breeding

### 030-BB1-163034 (Coleshill Sewage Treatment Works, Coleshill Industrial Estate)

4.4.84 Within this site, 61 species were recorded of which 27 species are notable. Twelve notable species are thought to have bred on site.

Table 75 Records of notable bird species recorded within 030-BB1-163034 during the 2013 breeding bird surveys

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	17	4	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	3	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	18	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	14	5	Likely breeding
Gadwall	<i>Anas strepera</i>	Amber List BoCC	17	4	Not breeding on site
Green sandpiper	<i>Tringa ochropus</i>	Schedule 1, Amber List BoCC	1	2	Not breeding (winter record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	2	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	1	1	Not breeding on site
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	3	1	Likely breeding
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	1	2	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	20	1	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	2	2	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	3	1	Likely breeding
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	2	4	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	52	5	Likely breeding
Redstart	<i>Phoenicurus phoenicurus</i>	Amber List BoCC	1	1	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	1	1	Not breeding (winter record)

Common name	Latin name	Status	Peak count of individuals across all survey visits	Number of surveys during which species was recorded (out of 4)	Breeding status on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	4	4	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	2	1	Not breeding on site
Shoveler	<i>Anas clypeata</i>	Amber List BoCC	8	1	Not breeding on site
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	5	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	12	5	Breeding nearby
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	7	2	Breeding nearby
Teal	<i>Anas crecca</i>	Amber List BoCC	33	3	Not breeding on site
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	6	4	Likely breeding

### *Barn owl field surveys*

4.4.85 Six sites within this area underwent field surveys for barn owls. See Table 44 for details.

#### **030-BB3-013 (grass field to the west of Coleshill)**

4.4.86 This site consisted of Type 3 improved grasslands and was poor for small mammals. After an investigative field survey this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out

#### **030-BB3-014 (grass fields to the west of Coleshill)**

4.4.87 This site is a mixture of arable land use and Type 3 grassland, which is regularly mown. A site visit identified lots of barn owl pellets in a courtyard of the main building. A few pellets were also found at the base of four trees around the site.

4.4.88 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.

4.4.89 During the vantage point surveys no barn owls were seen in or around the buildings, although a few fresh pellets were found in the courtyard.

4.4.90 No nest site verification survey was conducted because no suitable nest features were identified.

#### **030-BB3-015 (fields near Gilson)**

4.4.91 An investigative field survey in February 2013 found that two trees had barn owl pellets at the base and large cracks with the potential for a barn owl nest.

- 4.4.92 A nest site verification survey was carried out in May 2013 using a ladder to inspect the trees. The survey showed no recent evidence of use by barn owls, no signs of pellets or splashing in either tree, nor were there signs of a nest (recent or historical).
- 4.4.93 This area was considered unused by barn owl in the breeding season. Therefore, no further surveys were carried out.

**030-BB3-016 (farm site to the south of Water Orton)**

- 4.4.94 This site appeared to have some suitable Type 2 grassland habitat for barn owls, although close to the M42 and M6 motorways. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

**030-BB3-017 (grass fields to the south of Water Orton)**

- 4.4.95 This site appeared to contain suitable Type 2 habitat for barn owls, although close to the M42 motorway. An investigative field survey found that this area was used by barn owl. One large oak tree showed high potential for a roost site and many pellets were found around it on the ground. Another large oak tree within the same field showed evidence of a potential nest site, with a large hole and lots of pellets.
- 4.4.96 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.97 Three vantage point surveys were carried out at this site and barn owls were seen on each occasion. On two surveys a single barn owl was observed leaving the potential nest tree.
- 4.4.98 On the third and final survey a pair of barn owls were seen at dusk flying together. The pair was flying high over the fields in a south-east to north-west direction, circling each other and calling.
- 4.4.99 A nest site verification survey was then conducted to inspect the tree more closely using a ladder. Inside the tree were lots of fresh pellets but no other recent signs of nesting. This tree is considered likely to be a traditional nest site.

**030-BB3-018 (fields near Gilson)**

- 4.4.100 After an investigative field survey this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out.

*Desk study*

- 4.4.101 There are no statutory sites within 5km of the route of the Proposed Scheme within the area which have been designated due to their bird populations.
- 4.4.102 There are five non-statutory sites within 5km of the route of the Proposed Scheme within CFA19 which mention birds in their designation. Of these Coleshill Park Belt Local Wildlife Site falls within the land required for the construction of the Proposed Scheme. Common farmland and woodland birds are listed in the designation, all of which have been recorded during the 2013 breeding bird surveys.

- 4.4.103 Wheeley Moor Farm Meadows Local Wildlife Site is within 5m of the land required for construction of the Proposed Scheme. However only common farmland and scrub species are noted in the designation.
- 4.4.104 There is one record of barn owls within 1.5km of the route of the Proposed Scheme: Coleshill Hall, approximately 230m from the route of the Proposed Scheme has a record of old pellets in an outbuilding.
- 4.4.105 Anecdotal information obtained from local recorders during a meeting with Warwickshire Wildlife Trust and Warwickshire County Council includes records of snipe breeding within the wet area to the immediate south of Coleshill Sewage Treatment Works. This site is now considered to be too overgrown to be suitable for breeding snipe. This area was surveyed during the 2013 breeding bird surveys and breeding snipe were not recorded.

### Discussion

- 4.4.106 Breeding populations of notable species were recorded at all nine sites. However, a notable bird population of lapwings potentially of 1% of the estimated county population were also recorded at 030-BB1-162027 (see Table 76).

Table 76: Particularly notable bird species breeding populations recorded within CFA19

Species	Site	Number of confirmed territories	Number of probable territories	Estimated breeding population for West Midlands	Percentage of regional population
Lapwing	030-BB1-162027	3		250-2,500	0.1-1.2%
Barn owl	030-BB3-017		1	50-250	0.4-2%

- 4.4.107 Three pairs of lapwings were thought to breed within 030-BB1-162027 (Coleshill Manor Office Campus). The West Midland Bird Club reported 132 confirmed breeding territories within Warwickshire in 2009. Although there is likely to have been some under-recording, the breeding population at Coleshill Manor Office Campus is considered to be greater than 1% of the estimated county population.
- 4.4.108 030-BB3-014 (near Coleshill) was only found to be supporting barn owl occasionally due to the fact that barn owl was not seen on any of the surveys. The evidence of pellets suggests that this site may be used as an occasional roost and that this site does lie within a barn owls home range. However, the fact that no nest site or potential nest site was found, combined with the absence of a sighting during vantage point surveys suggests that barn owls must come into the site occasionally from elsewhere (possibly across the Motorway from nearby 030-BB3-017) and are not spending much of their time here.
- 4.4.109 The most active site for barn owls within the area was 030-BB3-017 (near Water Orton). Barn owls were seen on each vantage point survey conducted at this site and the fact that on the last survey a pair was recorded together gives a high indication of a breeding territory. Also the large number of fresh pellets suggests regular use.

Therefore, although nesting could not be confirmed in 2013, this is considered likely to be a traditional nest site for barn owls and may be used in future years<sup>43</sup>.

- 4.4.110 The potential nest site lies within the land required for the Proposed Scheme and will be demolished.
- 4.4.111 Due to limited access within this area the presence of barn owls within areas currently unsurveyed cannot be ruled out. The Warwickshire County Council provided a record of barn owls within 1.5km of the scheme, and in addition, there are suitable potential foraging, nesting and roosting areas for barn owl in some of these unsurveyed areas.

## CFA20 Curdworth to Middleton

### *Breeding bird field surveys*

- 4.4.112 Nine sites were surveyed within this area for breeding birds, totalling an area of approximately 210.3Ha:
- 030-BB1-166035; arable, 37.3ha (Dunton Hall, to the north-east of Curdworth);
  - 030-BB1-167036; arable, 23.4ha (Lower Mill Plantation, to the west of Marston);
  - 030-BB1-167037; woodland, 12.9ha (area of plantation woodland off Marston Lane, to the west of Marston);
  - 030-BB1-167038; wetland (farm pond), 0.7ha (Mullensgrove Farm, to the north-east of Curdworth);
  - 030-BB1-167039; 0.7ha transect running along the Birmingham and Fazeley Canal at Bodymoor Heath, through arable fields past Lower farm, up to Middleton Hall and including Middleton Pool SSSI;
  - 030-BB1-168040; wetland (fishing lakes), 5.3ha (Cuttle Mill Fishery, to the west of Marston);
  - 030-BB1-170041; wetland (quarry lakes), 9.0ha (Middleton Hall Farm Quarry, to the south-east of Middleton);
  - 030-BB1-171042; arable, 46.1ha (Park Gate Farm, arable fields and a small open reservoir, to the east of Middleton); and
  - 030-BB1-172044; arable, 74.9ha (arable fields to the immediate north of Middleton).
- 4.4.113 A total of 96 species were recorded within CFA20 during the 2013 breeding bird surveys, of which 54 are notable.

### **030-BB1-166035 (Dunton Hall, to the north-east of Curdworth)**

- 4.4.114 Within this site, 52 species were recorded of which 26 species are notable. Sixteen notable species were thought to have bred on site.

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<sup>43</sup> According to the Barn Owl Conservation Trust, barn owls generally choose to use the same roost and nest sites throughout their lives. When a home range is vacated for a period and then re-occupied, the new occupants will often choose the same nest and roost sites as the previous residents used (The Barn Owl Trust (2012), *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter). Due to 2013 having been a poor year for breeding barn owls, traditional nest sites that were unoccupied in 2013 are considered likely to be used in future years.



## Appendix EC-002-003 | Breeding birds

Table 77: Records of notable birds recorded within 030-BB1-166035 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	5	4	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	6	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	6	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	1	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	1	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	1	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	11	4	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	7	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	22	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	6	1	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	2	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	4	1	Likely breeding
Peregrine	<i>Falco peregrinus</i>	Schedule 1, Annex 1	1	1	Not breeding on site
Pochard	<i>Aythya ferina</i>	Amber List BoCC	1	1	Not breeding on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	14	1	Not breeding (wintering record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	36	3	Breeding nearby
Stock dove	<i>Columba oenas</i>	Amber List BoCC	3	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	20	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	4	2	Breeding nearby
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	5	1	Possibly breeding
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	1	Possibly breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	2	Likely breeding

**030-BB1-167036 (Lower Mill Plantation, to the west of Marston)**

4.4.115 Within this site, 43 species were recorded of which 20 species are notable. Thirteen notable species are thought to have bred on site.

Table 78: Records of birds recorded within 030-BB1-167036 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	150	2	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	1	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	14	1	Not breeding (wintering record)
House martin	<i>Delichon urbica</i>	Amber List BoCC	9	1	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	3	4	Confirmed breeding (three confirmed territories)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	3	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	12	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	2	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	6	4	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	9	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	3	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	3	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	6	1	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	11	2	Breeding nearby
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	4	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	3	2	Confirmed breeding (two confirmed territories)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

**030-BB1-167037 (area of woodland off Marston Lane, to the west of Marston)**

4.4.116 Within this site, 34 species were recorded of which 15 species are notable. Ten notable species were thought to have bred on site.

Table 79: Records of notable birds recorded within 030-BB1-167037 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	4	2	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	2	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	7	4	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	1	Likely breeding
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	1	1	Not breeding on site
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	4	1	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	2	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	1	1	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	6	3	Breeding nearby
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	2	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	3	Likely breeding

**030-BB1-167038 (Mullensgrove Farm, to the north-east of Curdworth)**

4.4.117 Within this site, 39 species were recorded of which 15 species are notable. Nine notable species were thought to have bred on site.

Table 80: Records of notable birds recorded within 030-BB1-167038 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	3	3	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	6	1	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	6	5	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	2	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	11	2	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	7	2	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	13	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	12	4	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	11	1	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	1	1	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	3	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	2	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	20	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	4	2	Breeding nearby
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### 030-BB1-167039 (transect running between the Birmingham and Fazeley Canal at Bodymoor Heath and Middleton Pool SSSI)

4.4.118 Within this site, 80 species were recorded of which 42 species are notable. Twenty-three notable species are thought to have bred on site.

Table 81: Records of notable birds recorded within 030-BB1-167039 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	22	5	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	2	Likely breeding
Common tern	<i>Sterna hirundo</i>	Annex 1, Amber List BoCC	2	1	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	10	4	Likely breeding

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Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	14	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	1	1	Not breeding (wintering record)
Gadwall	<i>Anas strepera</i>	Amber List BoCC	5	5	Not breeding on site
Golden plover	<i>Pluvialis apricaria</i>	Annex 1, Amber List BoCC	10	1	Not breeding (wintering record)
Green sandpiper	<i>Tringa ochropus</i>	Schedule 1, Amber List BoCC	1	2	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	2	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	1	Possibly breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	1	1	Likely breeding
Greylag goose	<i>Anser anser</i>	Amber List BoCC	4 (feral population)	3	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	2	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	6	5	Likely breeding
Jack snipe	<i>Limnocryptes minimus</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	3	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	25	5	Confirmed breeding (two confirmed territories)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	25	3	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	5	3	Likely breeding
Little egret	<i>Egretta garzetta</i>	Annex 1, Amber List BoCC	1	1	Not breeding on site
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	2	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	28	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	2	Not breeding (passage record)
Merlin	<i>Falco columbarius</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Not breeding (wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	5	1	Not breeding on site

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	1	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	9	5	Likely breeding
Shelduck	<i>Tadorna tadorna</i>	Amber List BoCC	2	1	Not breeding on site
Shoveler	<i>Anas clypeata</i>	Amber List BoCC	2	2	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	9	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	3	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	7	3	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	22	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	8	2	Breeding nearby
Teal	<i>Anas crecca</i>	Amber List BoCC	12	3	Likely breeding
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	16	3	Likely breeding
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	2	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	5	4	Confirmed breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	7	5	Likely breeding (one confirmed territory)

### 030-BB1-168040 (Cuttle Mill Fishery, to the west of Marston)

4.4.119 Within this site, 42 species were recorded of which 16 species are notable. Seven notable species are thought to have bred on site.

Table 82: Records of notable birds recorded within 030-BB1-168040 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	3	3	Not breeding on site
Common tern	<i>Sterna hirundo</i>	Annex 1, Amber List BoCC	2	2	Not breeding on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	2	3	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Greylag goose	<i>Anser anser</i>	Amber List BoCC	6 (feral population)	1	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	5	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	2	2	Confirmed breeding (one confirmed territory)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	2	5	Not breeding on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	16	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	1	Not breeding (passage record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	22	1	Not breeding (wintering record)
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	7	1	Not breeding on site
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	1	Breeding nearby
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	4	4	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding

### 030-BB1-170041 (Middleton Hall Farm Quarry, to the south-east of Middleton)

4.4.120 Within this site, 49 species were recorded of which 28 species are notable. Thirteen notable species were thought to have bred on site.

Table 83: Records of notable birds recorded within 030-BB1-170041 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	250	4	Not breeding on site
Common sandpiper	<i>Actitis hypoleucos</i>	Amber List BoCC	1	1	Not breeding (passage record)
Common tern	<i>Sterna hirundo</i>	Annex 1, Amber List BoCC	1	1	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	1	2	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	3	3	Likely breeding
Gadwall	<i>Anas strepera</i>	Amber List BoCC	3	2	Not breeding on site
Greylag goose	<i>Anser anser</i>	Amber List BoCC	2 (feral population)	1	Likely breeding
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	11	1	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	6	1	Breeding nearby
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Probably breeding (one probable/possible territory)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	22	5	Not breeding on site
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	4	5	Likely breeding
Little ringed plover	<i>Charadrius dubius</i>	Schedule 1	3	3	Confirmed breeding (two confirmed territories)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	22	5	Likely breeding
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	9	5	Confirmed breeding (two confirmed territories, one probable/possible territory)
Pochard	<i>Aythya ferina</i>	Amber List BoCC	1	1	Not breeding on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	1	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	6	4	Confirmed breeding (three confirmed territories)
Shelduck	<i>Tadorna tadorna</i>	Amber List BoCC	2	2	Not breeding on site
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	8	2	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Breeding nearby



Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Teal	<i>Anas crecca</i>	Amber List BoCC	2	1	Not breeding on site
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	37	5	Not breeding on site
Wigeon	<i>Anas penelope</i>	Amber List BoCC	9	1	Not breeding on site
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	2	Probably breeding (one probable/possible territory)

### 030-BB1-171042 (Park Gate Farm, to the east of Middleton)

4.4.121 Within this site, 29 species were recorded of which 14 species are notable. Seven notable species were thought to have bred on site.

Table 84: Records of notable birds recorded within 030-BB1-171042 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	2	1	Not breeding on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	2	1	Likely breeding
Gadwall	<i>Anas strepera</i>	Amber List BoCC	2	1	Not breeding on site
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Possibly breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	1	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	1	Likely breeding
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	2	1	Not breeding on site
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	1	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	7	1	Likely breeding
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	8	1	Not breeding on site
Wigeon	<i>Anas penelope</i>	Amber List BoCC	4	1	Not breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	2	1	Likely breeding

**030-BB1-172044 (arable field to the immediate north of Middleton)**

4.4.122 Within this site, 44 species were recorded of which 19 species are notable. Fifteen notable species are thought to have bred on site.

Table 85: Records of notable birds recorded within 030-BB1-172044 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	1	Not breeding on site
Common tern	<i>Sterna hirundo</i>	Annex 1, Amber List BoCC	1	1	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	13	4	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	2	1	Possibly breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	11	4	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	2	Possibly breeding
Hobby	<i>Falco subbuteo</i>	Schedule 1	1	2	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	3	3	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	4	3	Confirmed breeding (two confirmed territories)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	6	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	2	2	Likely breeding
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	4	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	20	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	3	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	18	5	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	2	Breeding nearby
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	4	2	Probably breeding (two probable/possible territories)

### *Barn owl field surveys*

- 4.4.123 Three sites within the area underwent field surveys for barn owls. See Table 44 for details.

#### **030-BB3-019 (farm site near Curdworth)**

- 4.4.124 This site appeared to have suitable Type 2 habitat for barn owls with semi-improved tussocky grassland suitable to support small mammal populations. The site provided evidence of use by barn owls in a dove cote in a semi-improved grassland field. Inside this feature large amounts of barn owl pellets and faecal splashing provided strong evidence for use by barn owls.
- 4.4.125 Further evidence was found inside a barn. Significant splashing was noted down the inside wall of the barn, below a hole in the ceiling and there were barn owl pellets on the floor.
- 4.4.126 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.127 During the vantage point surveys barn owls were seen flying in and out of the barn.
- 4.4.128 A nest site verification survey was conducted at the barn using a ladder. Due to the potentially fragile state of the inside barn wall surveyors could not access the hole fully. There was no conclusive evidence as to whether this barn was used as a nest site in spring 2013. However, it is considered likely to be a traditional nest site.

#### **030-BB3-020 (farm site near Marston)**

- 4.4.129 After an investigative field survey this area was considered unsuitable for barn owl and had no evidence of use by barn owl. Therefore, no further surveys were carried out.
- 4.4.130 This site was not found to be supporting barn owl populations and is not likely to be included in a current barn owls home range. Therefore, these sites are of negligible importance for barn owls.

#### **030-BB3-021 (grass area near Middleton)**

- 4.4.131 During an investigative survey of this site, barn owl pellets were found inside a large, open corrugated steel barn. Sightings of barn owls had been noted here during the wintering bird vantage point providing evidence for use of the site by barn owls.
- 4.4.132 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.133 During the vantage point surveys no barn owl was seen in or around the barn and no fresh evidence was found. After two vantage point surveys this area was considered only to be used by barn owls rarely (probably as a wintering roost) and no further vantage point surveys were required.

### *Desk study*

- 4.4.134 There are three statutory sites within 5km of the route of the Proposed Scheme which have been designated due to their bird populations.
- 4.4.135 Whitacre Heath SSSI lies over 500m from the land required for the construction of the Proposed Scheme. It is a former gravel quarry notified for its breeding wetland bird

assemblage. A wide range of species are included in the citation and include wildfowl (e.g. teal), waders (e.g. snipe and redshank), and warblers (e.g. reed warbler and grasshopper warbler) associated with the wetland habitats. Short-eared owl and hen harrier overwinter and roost within the site. The SSSI is one of a chain of water bodies within the floodplain of the River Tame.

- 4.4.136 Middleton Pool Site of Special Scientific Interest (SSSI) and Middleton Pool Local Nature Reserve (LNR) have the same boundary, and are located adjacent to the land required for construction of the Proposed Scheme. The lake and surrounding habitat noted for its breeding avifauna, in particular, wildfowl and woodland bird species.
- 4.4.137 There are eight non-statutory sites within 5km of the land required for construction of the Proposed Scheme within the area which mention birds in their designation. Of these, North Wood LWS lies within the land required for construction of the Proposed Scheme. This site supports a range of common woodland species.
- 4.4.138 There are two records of barn owl within 1.5km of the route of the Proposed Scheme within CFA20.

Table 86: Barn owl records received from Warwickshire County Council

Location	Details	Date	Distance from the route (m)
Whitacre Heath Nature Reserve	No details	Not specified	1,360m
Kingsbury Water Park (Richard's Meadow)	Six chicks in nest box	Not specified	1,360m

### Discussion

- 4.4.139 Breeding populations of notable species were recorded at all nine sites. However, particularly notable bird populations of barn owl, lapwing, yellow wagtail, little ringed plover, oystercatcher and sand martin were recorded (see Table 87).

Table 87: Particularly notable bird species breeding populations recorded within CFA20

Species	Site	Number of confirmed territories	Number of probable/possible territories	Estimated breeding population for West Midlands	Percentage of county population
Barn owl	030-BB3-019		1	50-250	0.4-2%
Lapwing	030-BB1-167039	5	1	250-2,500	0.2-2%
Yellow wagtail	030-BB1-167039	3	1	250-2,500	0.1-1.2%
Little ringed plover	030-BB1-170041	2		50-250	0.8-4%
Oystercatcher	030-BB1-170041	3		10-50	6-30%
Sand martin	030-BB1-170041	3		250-2,500	0.1-1.2%

- 4.4.140 Up to six pairs of lapwings were thought to have bred at 030-BB1-167039 (transect between the Birmingham and Fazeley Canal at Bodymoor Heath and Middleton Pool SSSI). The West Midland Bird Club reported 132 confirmed breeding territories within Warwickshire in 2009. Although there is likely to have been some under-recording, this breeding is considered to be greater than 1% of the estimated county population.

- 4.4.141 Up to four pairs of yellow wagtails were thought to have bred at 030-BB1-167039 (transect between the Birmingham and Fazeley Canal at Bodymoor Heath and Middleton Pool SSSI). Although only 65 pairs of yellow wagtails were recorded breeding within Warwickshire (based on the 2009 West Midland Bird Club Report), this species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of yellow wagtail territories recorded are likely to be less than 1% of the county population.
- 4.4.142 Two pairs of little ringed plover were thought to have bred at 030-BB1-170041 (Middleton Hall Farm Quarry). The most recent (2009) West Midland Bird Club Report reported at least 22 pairs of little ringed plover breeding within Warwickshire. Although there is likely to have been some under-recording, this little ringed plover population is considered to be greater than 1% of the county population.
- 4.4.143 Up to three pairs of oystercatcher were thought to have bred at 030-BB1-170041 (Middleton Hall Farm Quarry), including a pair seen with two juveniles on the fifth visit. The most recent (2009) West Midland Bird Club Report reported at least 10 pairs, although breeding was only confirmed for three pairs. These birds are readily detectable due to their striking plumage and loud repetitive calls and county estimates should be fairly accurate. The oystercatcher population at Middleton Hall Farm Quarry is considered to be greater than 1% of the county population.
- 4.4.144 Three pairs of sand martin were thought to have bred at 030-BB1-170041 (Middleton Hall Farm Quarry). The 2009 West Midland Bird Club Report reported at approximately 243 pairs from three sites. This species is thought to be under-recorded, with more than three colonies expected within Warwickshire, and it is considered likely that three pairs equates to less than 1% of the county population.
- 4.4.145 A farm site near Curdworth (030-BB3-019) was found to be supporting barn owls. Occasional sightings of a barn owl flying in and out of the barn during the vantage point surveys suggest that this site is at least a frequent roost site. The evidence inside the barn suggests that this may have been used as a nest site previously due to the copious amount of pellets and splashing. Therefore, this area must be considered a traditional nest site for barn owls, and although nesting could not be confirmed this year, nesting is likely to occur in future years<sup>44</sup>.

## **CFA21 Drayton Bassett, Hints and Weeford**

### *Breeding bird field surveys*

- 4.4.146 Six sites were surveyed within the CFA21 for breeding bird, totalling an area of approximately 472Ha:
- 030-BB1-172043; arable, 39.6ha (Brook Farm, to the north of Middleton);
  - 030-BB1-174045; arable, 111.4ha (Hill Farm, west of Drayton Bassett);

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<sup>44</sup> According to the Barn Owl Conservation Trust, barn owls generally choose to use the same roost and nest sites throughout their lives. When a home range is vacated for a period and then re-occupied, the new occupants will often choose the same nest and roost sites as the previous residents used (The Barn Owl Trust (2012), *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter). Due to 2013 having been a poor year for breeding barn owls, traditional nest sites that were unoccupied in 2013 are considered likely to be used in future years.

- 030-BB1-175046; 3.9ha transect to the south of Hints, running north along Bangley Lane, past Great Bangley Farm and up to Fordway Farm;
- 030-BB1-176047; grassland, 54.4ha (arable fields to the south-east of Hints, includes Roundhill Wood);
- 030-WB1-177048; arable (129.9ha) and grassland (19.4ha) (Bucks Head Farm, to the east of Weeford); and
- 030-WB1-179049; arable (90.4ha) and grassland (23.0ha) (Packington Moor Farm, including Moor Covert, to the south-west of Whittington Heath).

4.4.147 A total of 84 species were recorded within CFA21 during the winter 2012/13 surveys, of which 47 are notable.

#### 030-BB1-172043 (Brook Farm, to the north of Middleton)

4.4.148 Within this site, 32 species were recorded of which 15 species are notable. Nine notable species are thought to have bred on site.

Table 88: Records of birds recorded within 030-BB1-172043 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Duncock	<i>Prunella modularis</i>	Amber List BoCC, SPI	4	1	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	1	1	Possibly breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	4	1	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	10	1	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	3	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	10	1	Likely breeding
Little egret	<i>Egretta garzetta</i>	Annex 1, Amber List BoCC	1	1	Not breeding on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	10	1	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	28	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	7	1	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	4	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding
Teal	<i>Anas crecca</i>	Amber List BoCC	6	1	Not breeding on site

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	40	1	Likely breeding

### 030-BB1-174045 (Hill Farm, west of Drayton Bassett)

4.4.149 Within this site, 55 species were recorded of which 20 species are notable. Fifteen notable species are thought to have bred on site.

Table 8g: Records of notable birds recorded within 030-BB1-174045 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	6	2	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	13	3	Likely breeding
Curlew	<i>Numenius arquata</i>	Amber List BoCC, SPI	1	1	Not breeding (passage record)
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	7	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	3	1	Not breeding (wintering record)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	1 (feral population)	1	Breeding nearby
Hobby	<i>Falco subbuteo</i>	Schedule 1	2	2	Confirmed breeding (one confirmed territory)
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	4	5	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	2	Possibly breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	13	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	255	4	Likely breeding
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	1	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	14	4	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	9	1	Not breeding (wintering record)
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	70	2	Not breeding (wintering record)

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	3	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	1	1	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	18	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	2	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	3	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	8	2	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	3	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	3	1	Not breeding on site
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	8	3	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	6	4	Likely breeding

**030-BB1-175046 (transect to the south of Hints, running north along Bangley Lane, past Great Bangley Farm and up to Fordway Farm)**

4.4.150 Within this site, 44 species were recorded of which 20 species are notable. Fifteen notable species are thought to have bred on site.

Table 90: Records of birds recorded within 030-BB1-175046 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	3	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	12	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	13	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	40	2	Not breeding (wintering record)
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	1	Possibly breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	8	5	Likely breeding



Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	2	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	3	3	Confirmed breeding (one confirmed territory)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	46	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	3	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	74	2	Not breeding (wintering record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	3	3	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	40	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	2	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	40	2	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	16	4	Likely breeding

### 030-BB1-176047 (arable fields to the south-east of Hints, includes Roundhill Wood)

4.4.151 Within this site, 52 species were recorded of which 21 species are notable. Thirteen notable species are thought to have bred on site.

Table g1: Records of notable birds recorded within 030-BB1-176047 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	13	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	20	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Greenshank	<i>Tringa nebularia</i>	Schedule 1	1	1	Not breeding (passage record)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	2 (feral population)	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	1	1	Probably (one probable/possible territory nearby)
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	1	1	Not breeding on site
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	7	1	Not breeding on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	22	5	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	4	4	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	68	2	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	3	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	11	1	Likely breeding
Teal	<i>Anas crecca</i>	Amber List BoCC	2	2	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	2	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

#### 030-BB1-177048 (Bucks Head Farm, to the east of Weeford)

4.4.152 Within this site, 76 species were recorded of which 41 species are notable. Twenty-one notable species are thought to have bred on site.

## Appendix EC-002-003 | Breeding birds

Table g2: Records of notable birds recorded within 030-WB1-177048 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	10	1	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	10	3	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	14	5	Confirmed breeding (five confirmed territories)
Crossbill	<i>Loxia curvirostra</i>	Schedule 1	2	2	Not breeding on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	20	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	101	2	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	2	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	6	5	Confirmed breeding (four confirmed territories)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	2 (feral population)	4	Breeding nearby
Herring gull	<i>Larus argentatus</i>	Red List BoCC, SPI	2	1	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	4	1	Breeding nearby
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	13	5	Likely breeding
Jack snipe	<i>Lymnocyptes minimus</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	3	4	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	3	2	Probably breeding (two probable/possible territories)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	17	3	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	5	2	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	33	5	Likely breeding
Little grebe	<i>Tachybaptus ruficollis</i>	Amber List BoCC	2	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	10	5	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	22	2	Not breeding (wintering record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	6	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	4	Likely breeding
Sand martin	<i>Riparia riparia</i>	Amber List BoCC	3	1	Not breeding on site
Shelduck	<i>Tadorna tadorna</i>	Amber List BoCC	4	2	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	26	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	7	2	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	7	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	8	5	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	9	5	Likely breeding
Stone-curlew	<i>Burhinus oedicephalus</i>	Schedule 1, Annex 1, Amber List BoCC, SPI	1	1	Not breeding (passage record)
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	6	4	Likely breeding
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	12	2	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	13	5	Confirmed breeding (four confirmed territories five probable/possible territories)
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	4	1	Not breeding on site
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	3	1	Not breeding (passage record)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	2	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	17	3	Confirmed breeding (four confirmed territories, two probable/possible territories)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	27	5	Likely breeding

### 030-BB1-179049 (Packington Moor Farm, to the south-west of Whittington Heath)

4.4.153 Within this site, 52 species were recorded of which 22 species are notable. Sixteen notable species are thought to have bred on site.

Table 93: Records of notable birds recorded within 030-BB1-179049 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	6	4	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	1	1	Possibly breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	11	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	82	1	Not breeding (wintering record)
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	2	Possibly breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	8	5	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	100	1	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	1	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	21	5	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	40	4	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	26	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	2	1	Likely breeding
Shelduck	<i>Tadorna tadorna</i>	Amber List BoCC	4	1	Not breeding on site
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	34	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	30	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	2	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	8	5	Confirmed breeding (three confirmed territories, two probable/possible territories)
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	5	3	Probably breeding (two probable/possible territories)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	34	5	Likely breeding

### *Barn owl field surveys*

- 4.4.154 Eight sites within the area underwent an initial field survey for barn owls. See Table 44 for details.

#### **030-BB3-022 (Farm site near Middleton)**

- 4.4.155 This site consisted of arable land use and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

#### **030-BB3-023 (Farm site to the north of Middleton)**

- 4.4.156 This site had good rough grass verges suitable for supporting small mammal populations. An investigative field survey found limited evidence of use by barn owls; two old barn owl pellets were found under trees on the site, suggesting occasional foraging use. However, no further surveys were carried out due to access issues.

#### **030-BB3-024 (Farm site to the west of Drayton Bassett)**

- 4.4.157 This site consisted of mostly arable land use and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

### *030-BB3-025 (Farm site near Tamworth)*

- 4.4.158 This site consists of Type 2 and Type 3 grassland habitat and appeared reasonable habitat for barn owls, being able to support small mammal populations. Many of the fields were grazed by horses leaving the grass fairly short which is not ideal for barn owls as this does not support large populations of small mammals. However, during the investigative field survey evidence of barn owls was found at six trees across the site.
- 4.4.159 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.

- 4.4.160 During the first vantage point survey, a barn owl was seen flying from south to north into a hole in a tree around a pond in the middle of the field at dawn. On the second survey a barn owl flew south out of the hole in the tree at dusk. Thirteen minutes later the owl returned from the west carrying food into the hole and 10 minutes after that it flew out again towards the west. At dawn the owl was seen returning to the hole from the west. After two vantage point surveys this area was confirmed to contain a breeding pair and no further vantage point surveys were required.

**030-BB3-026 (Fields near Hints)**

- 4.4.161 This site consisted of arable land use and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls and no further surveys were carried out.

**030-BB3-027 (Arable fields near Hints)**

- 4.4.162 This site consisted of Type 3 grassland habitat grazed by livestock. An investigative field survey found little evidence of use by barn owls; one old pellet was found in a tree which currently contained a mallard nest. This area was considered unused by barn owls in the breeding season, therefore, no further surveys were carried out.

**030-BB3-028 (Farm site near Weeford)**

- 4.4.163 This site consisted of arable land use and appeared poor for small mammals. However, Type 2 and Type 3 grassland occurs immediately to the south of the site. An investigative field survey found evidence of use by barn owls in four places within the site; pellets were found under two trees and inside two barns.
- 4.4.164 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.165 The vantage point surveys only recorded a barn owl during the final survey in which it was seen three times foraging across the site. A barn owl was also seen by surveyors after a previous vantage point survey had ended.
- 4.4.166 The nest site verification survey found there to be a traditional nest site in a hole in a tree near the main farm buildings. Inside the hole were lots of pellets and some old nest debris. This tree was not being used for nesting this year but has been used for nesting in previous years.

**030-BB3-029 (Farm site to the south of Whittington Heath)**

- 4.4.167 This site consisted of some arable land use and some grazed type 3 grassland which appeared poor for small mammals. However, an investigative field survey found evidence of use by barn owls in two places within the site; pellets were found under a tree with a large hole, and inside an old shed in a field.
- 4.4.168 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.169 Barn owls were not seen during the vantage point surveys at this site.
- 4.4.170 A nest site verification survey found that the tree in the north-east of the site had many barn owl pellets inside the hole. There was no evidence of recent nesting in this

tree but the tree had likely been used for nesting in previous years and should be considered as a traditional nest site.

- 4.4.171 A hobby was heard on two separate occasions at 030-BB3-029 during barn owl surveys. Hobbies (notable for their Schedule 1 status) are falcons which spend their summers in UK. This bird was seen on two occasions (once carrying food) and was considered likely to be breeding nearby. However, bird surveys of the site have confirmed that hobbies did not breed within the site itself.

### *Desk study*

- 4.4.172 There are no statutory sites within 5km of the route of the Proposed Scheme within CFA21 which have been designated due to their bird populations.
- 4.4.173 There are 17 non-statutory sites within 5km of the route of the Proposed Scheme within CFA21 which mention birds in their designation. None of these will be directly impacted by the Proposed Scheme.
- 4.4.174 A total of five notable species, excluding barn owl, have records within 1km of the route of the Proposed Scheme.

Table 94: Notable species records within 1km of the route of the Proposed Scheme

Common name	Status	Number of records within 1km of the route
Brambling	Schedule 1	1 records
Fieldfare	Schedule 1, Red List BoCC	3 record
Green sandpiper	Schedule 1, Amber List BoCC	2 records
Peregrine	Schedule 1, Annex 1	1 records
Redwing	Schedule 1, Red List BoCC	3 record

- 4.4.175 Of these species, brambling, fieldfare, green sandpiper and redwing are likely to have been recorded during migration or over winter.
- 4.4.176 Peregrine could possibly have been a breeding record. However, it is considered that if peregrines were breeding within the areas surveyed, then the nest would be readily detectable and would have been recorded.
- 4.4.177 Only one barn owl record has been received within 1.5km of the route of the Proposed Scheme; a single sighting of a barn owl near Weeford in February 2008.

### *Discussion*

- 4.4.178 Breeding populations of notable species were recorded at all six sites and. However, particularly notable bird populations were recorded for six species (see Table 95).

Table 95: Particularly notable bird species breeding populations recorded within CFA21

Species	Site	Number of confirmed territories	Number of probable territories	Estimated breeding population for West Midlands	Percentage of regional population
Hobby	Farm site near Drayton Bassett	1		10-50	2-10%
Barn owl	030-BB3-025	1		50-250	0.4-2%



Species	Site	Number of confirmed territories	Number of probable territories	Estimated breeding population for West Midlands	Percentage of regional population
Barn owl	030-BB3-028		1	50-250	0.4-2%
Barn owl	030-BB3-029		1	50-250	0.4-2%
Corn bunting	030-BB1-177048	5		250-2,500	0.2-2%
Grey partridge	030-BB1-177048	4		250-2,500	0.2-1.6%
Tree sparrow	030-BB1-177048	4	5	250-2,500	0.4-3.6 %
Yellow wagtail	030-BB1-177048	5	1	250-2,500	0.2-2.4%
Tree sparrow	030-BB1-179049	3	2	250-2,500	0.2-2%

- 4.4.179 A pair of hobbies bred at a farm near Drayton Bassett. The West Midland Bird Club reported five confirmed breeding territories within Staffordshire in 2009, but had reports from 37 other sites, suggesting that breeding may have been under-recorded. However, a single pair is considered likely to be greater than 1% of the county population.
- 4.4.180 Five pairs of corn bunting were recorded breeding at Buck's Head Farm (030-BB1-177048). The West Midland Bird Club reported 42 singing males within Staffordshire in 2009. Even with the assumption of some under-recording, the corn bunting population at Buck's Head Farm is thought to be greater than 1% of the county population.
- 4.4.181 Up to nine pairs of tree sparrows were recorded breeding at Buck's Head Farm. The West Midland Bird Club reported confirmed breeding from 13 sites and probable breeding from a further 12 sites. Tree sparrow colonies are well monitored, and even with the assumption of some under-recording, it is considered that nine breeding pairs of tree sparrows are likely to be greater than 1% the county population.
- 4.4.182 Up to six pairs of yellow wagtail were recorded at Buck's Head Farm. Although the West Midland Bird Club only reported breeding of 34-36 pairs in Staffordshire, this species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of yellow wagtail territories recorded are likely to be less than 1% of the county population.
- 4.4.183 Four pairs of grey partridge were recorded at Buck's Head Farm. Although breeding grey partridge were only reported from 19 sites in Staffordshire (based on the 2009 West Midland Bird Club Report), this species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of grey partridge territories recorded are likely to be less than 1% of the county population.
- 4.4.184 Five pairs of tree sparrows were thought to breed within 030-BB1-179049 (Packington Moor farm). The West Midland Bird Club reported confirmed breeding from 13 sites

and probable breeding from a further 12 sites. Tree sparrow colonies are well monitored, and even with the assumption of some under-recording, it is considered that five breeding pairs of tree sparrows is likely to be greater than 1% the county population.

- 4.4.185 Three of the sites surveyed for barn owl within the Drayton Bassett, Hints and Weeford area contained nest sites/potential nest sites for barn owl.
- 4.4.186 2013 has had an unusually cold winter and spring, stretching through to the end of March and because of this, barn owls have suffered with regards to breeding and raising viable young. It must be concluded that although active nesting was only recorded at one barn owl site (030-BB3-025) during the surveys, 030-BB3-028 and 030-BB3-029 are thought to be traditional nest sites. Although these traditional nest sites were not used for raising young this year they will likely be used in future years<sup>45</sup>.

## CFA22 Whittington to Handsacre

### *Breeding bird field surveys*

- 4.4.187 Twelve sites were surveyed within CFA22 for breeding birds, totalling an area of approximately 450ha:
- 030-BB1-181050; grassland, 60.8ha (Whittington Heath Golf Course, Whittington Heath);
  - 030-BB1-182051 and 030-BB1-183052; arable, 94.4 (arable fields to the west of Streethay);
  - 030-BB1-184053; canal, 3.0ha (Coventry Canal);
  - 030-BB1-186054; industrial and arable, 61.3ha (Auction Centre and arable fields to south of Fradley Business Park);
  - 030-BB1-187055; arable 16ha (arable fields to the west of Fradley);
  - 030-BB1-187056; grassland and woodland, 50.2ha (Fradley Wood, to the west of Fradley, contains a mix of woodland and grassland habitat);
  - 030-BB1-188057; arable, 66.9ha (arable habitat to the west of Fradley);
  - 030-BB1-188058; woodland and arable, 14.6ha (Ravenshaw Wood, Black Slough Wood and Black Slough Farm, west of Fradley);
  - 030-BB1-188059; woodland, 4.6ha (Fradley Gorse, west of Fradley);
  - 030-WB1-189060; arable 38.0ha (arable fields to the south of King's Bromley Wharf Marina);
  - 030-WB1-190061; arable, 33.5ha (arable fields to the immediate west of King's Bromley Wharf Marina); and

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<sup>45</sup> According to the Barn Owl Conservation Trust, barn owls generally choose to use the same roost and nest sites throughout their lives. When a home range is vacated for a period and then re-occupied, the new occupants will often choose the same nest and roost sites as the previous residents used (The Barn Owl Trust (2012), *Barn Owl Conservation Handbook*. Pelagic Publishing: Exeter). Due to 2013 having been a poor year for breeding barn owls, traditional nest sites that were unoccupied in 2013 are considered likely to be used in future years.

- 030-BB1-192062; arable, 6.7ha (arable field to the immediate south of Handsacre).

4.4.188 A total of 86 species were recorded within CFA22 during the 2013 breeding bird surveys, of which 46 are notable.

#### **030-BB1-181050 (Whittington Heath Golf Course, Whittington Heath )**

4.4.189 Within this site, 43 species were recorded of which 17 species are notable. Ten notable species are thought to have bred on site.

Table 96: Records of notable birds recorded within 030-BB1-181050 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	1	Not breeding on site
Brambling	<i>Fringilla montifringilla</i>	Schedule 1	1	1	Not breeding (wintering record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	3	4	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	1	1	Confirmed breeding (two confirmed territories, one probable/possible territory)
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	8	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	16	3	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, SPI	1	2	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	2	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	2	1	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	2	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	4	5	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	20	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	104	1	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	1	Breeding nearby
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### 030-BB1-182051 and 030-BB1-183052 (arable fields to the west of Streethay)

4.4.190 Within this site, 52 species were recorded of which 28 species are notable. Fifteen notable species are thought to have bred on site.

Table 97: Records of notable birds recorded within 030-BB1-182051 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	10	2	Not breeding on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	25	3	Likely breeding
Corn bunting	<i>Emberiza calandra</i>	Red List BoCC, SPI	3	3	Probably breeding (two probable/possible territories)
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	15	5	Likely breeding
Grasshopper warbler	<i>Locustella naevia</i>	Red List BoCC, UK BAP	1	1	Not breeding (passage record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	2	2	Likely breeding
Hobby	<i>Falco subbuteo</i>	Schedule 1	1	1	Not breeding on site
House martin	<i>Delichon urbica</i>	Amber List BoCC	1	1	Not breeding on site
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	27	5	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	42	2	Not breeding on site
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, UK BAP	2	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	184	5	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	2	2	Breeding nearby
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	62	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	22	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	74	4	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	18	5	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	18	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	3	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	2	1	Possibly breeding
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	2	1	Not breeding (passage record)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	9	3	Confirmed breeding (two confirmed territories, one probable/possible territory)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	41	5	Likely breeding

### 030-BB1-184053 (Coventry Canal)

4.4.191 Within this site, 45 species were recorded of which 18 species are notable. Fourteen notable species were thought to have bred on site.

Table 98: Records of notable birds recorded within 030-WB1-184053 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	4	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	3	4	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	7	4	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	5	4	Confirmed breeding (one confirmed territory, one probable/possible territory)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	1	1	Not breeding on site
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	7	3	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	9	5	Likely breeding
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	5	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	6	4	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	5	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	14	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	5	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Not breeding on site
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	1	1	Not breeding (passage bird)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	1	2	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	1	3	Confirmed breeding (one confirmed territory)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	2	3	Likely breeding

### 030-BB1-186054 (Auction Centre and arable fields to south of Fradley Business Park )

4.4.192 Within this site, 53 species were recorded of which 27 species are notable. Seventeen notable species are thought to have bred on site.

Table 99: Records of birds recorded within 030-BB1-186054 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	4	2	Not breeding on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	2	4	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	23	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	9	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	19	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	4	4	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	1	Possibly breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	2	3	Breeding nearby
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	14	5	Confirmed breeding (two confirmed territories, one probable/possible territory)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	16	4	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	8	4	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	5	5	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	5	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	1	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	5	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	22	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	11	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	3	4	Probably breeding (three probable/possible territories)
Tufted duck	<i>Aythya fuligula</i>	Amber List BoCC	2	1	Not breeding on site
Wheatear	<i>Oenanthe oenanthe</i>	Amber List BoCC	1	1	Not breeding (passage bird)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	3	4	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	11	5	Likely breeding

### 030-BB1-187055 (arable fields to the west of Fradley)

4.4.193 Within this site, 26 species were recorded of which 12 species are notable. Seven notable species are thought to have bred on site.

Table 100: Records of birds recorded within 030-BB1-187055 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	25	1	Not breeding on site
Common sandpiper	<i>Actitis hypoleucos</i>	Amber List BoCC	1	1	Not breeding (passage record)
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	1	1	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	10	1	Not breeding (wintering record)
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	11	3	Probably breeding (two probable/possible territories)
Little ringed plover	<i>Charadrius dubius</i>	Schedule 1	3	2	Not breeding on site (passage record)



Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	5	2	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	2	2	Likely breeding
Snipe	<i>Gallinago gallinago</i>	Amber List BoCC	2	1	Not breeding (wintering record)
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### 030-BB1-187056 (Fradley Wood, to the west of Fradley)

4.4.194 Within this site, 41 species were recorded of which 17 species are notable. Fourteen notable species were thought to have bred on site.

Table 101: Records of notable birds recorded within 030-BB1-187056 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	3	5	Likely breeding
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	3	2	Likely breeding
Grey wagtail	<i>Motacilla cinerea</i>	Amber List BoCC	2	1	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	1	1	Likely breeding
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	2	2	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4	3	Likely breeding
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	6	1	Not breeding (wintering record)
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	1	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	5	2	Likely breeding
Spotted flycatcher	<i>Muscicapa striata</i>	Red List BoCC, SPI	1	1	Possibly breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	2	Likely breeding

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	1	Breeding nearby
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	3	3	Likely breeding
Woodcock	<i>Scolopax rusticola</i>	Amber List BoCC	1	2	Not breeding (wintering record)

### 030-BB1-188057 (arable habitat to the west of Fradley)

4.4.195 Within this site, 39 species were recorded of which 16 species are notable. Thirteen notable species are thought to have bred on site.

Table 102: Records of notable birds recorded within 030-WB1-188057 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	1	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	5	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	2	3	Likely breeding
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	1	Possibly breeding
Greylag goose	<i>Anser anser</i>	Amber List BoCC	2 (feral population)	1	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	1	4	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	1	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	10	5	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	4	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	2	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	3	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	1	Breeding nearby
Teal	<i>Anas crecca</i>	Amber List BoCC	24	2	Not breeding on site
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	1	Likely breeding
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	1	1	Likely breeding

### 030-BB1-188058 (Ravenshaw Wood, Black Slough Wood and Black Slough Farm, west of Fradley)

4.4.196 Within this site, 36 species were recorded of which 16 species are notable. Eleven notable species are thought to have bred on site.

Table 103: Records notable birds recorded within 030-BB1-188058 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	3	2	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	4	4	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	35	1	Not breeding (wintering record)
Grey partridge	<i>Perdix perdix</i>	Red List BoCC, SPI	2	2	Probably breeding (one probable/possible territory)
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	2	1	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	1	1	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	1	1	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	1	2	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	1	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	15	1	Not breeding (wintering record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	2	1	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	3	2	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	4	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	4	2	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	2	Breeding nearby

### 030-BB1-188059 (Fradley Gorse, west of Fradley)

4.4.197 Within this site, 28 species were recorded of which 5 species are notable. Four notable species are thought to have bred on site.

Table 104: Records of notable birds recorded within 030-BB1-188059 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	1	2	Likely breeding
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	1	3	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	1	Likely breeding

### 030-BB1-189060 (arable fields to the south of King's Bromley Wharf Marina)

4.4.198 Within this site, 50 species were recorded of which 23 species are notable. Sixteen notable species are thought to have bred on site.

Table 105: Records of notable birds recorded within 030-BB1-189060 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	1	2	Not thought to breed on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, UK BAP	2	1	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	6	4	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, UK BAP	10	5	Likely breeding
Fieldfare	<i>Turdus pilaris</i>	Schedule 1, Red List BoCC	52	1	Not breeding (wintering record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, UK BAP	2	2	Probably breeding (one probable/possible territory)
Lesser redpoll	<i>Carduelis cabaret</i>	Red List BoCC, UK BAP	5	1	Not breeding (wintering record)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, UK BAP	2	3	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	4	1	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	6	4	Likely breeding
Redwing	<i>Turdus iliacus</i>	Schedule 1, Red List BoCC	11	1	Not breeding (wintering record)

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, UK BAP	1	1	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, UK BAP	6	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, UK BAP	4	4	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, UK BAP	19	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	5	4	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	4	4	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	1	1	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, UK BAP	6	4	Confirmed breeding (one confirmed territory, one probable/possible territory)
Willow warbler	<i>Phylloscopus trochilus</i>	Amber List BoCC	2	4	Likely breeding
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, UK BAP	2	2	Probably breeding (one probable/possible territory)
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, UK BAP	9	5	Likely breeding

### 030-BB1-190061 (arable fields to the immediate west of King's Bromley Wharf Marina)

4.4.199 Within this site, 62 species were recorded of which 27 species are notable. Nineteen notable species are thought to have bred on site.

Table 106: Records of notable birds recorded within 030-BB1-190061 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Bullfinch	<i>Pyrrhula pyrrhula</i>	Amber List BoCC, SPI	3	2	Likely breeding
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	12	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	20	5	Likely breeding
Golden plover	<i>Pluvialis apricaria</i>	Annex 1, Amber List BoCC	12	1	Not breeding (wintering record)

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Grasshopper warbler	<i>Locustella naevia</i>	Red List BoCC, SPI	1	1	Not breeding (passage record)
Green woodpecker	<i>Picus viridis</i>	Amber List BoCC	1	1	Likely breeding
House martin	<i>Delichon urbica</i>	Amber List BoCC	3	1	Not breeding on site
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	1	1	Breeding nearby
Kingfisher	<i>Alcedo atthis</i>	Schedule 1, Annex 1, Amber List BoCC	2	1	Probably breeding (one probable/possible territory)
Linnet	<i>Carduelis cannabina</i>	Red List BoCC, SPI	5	4	Likely breeding
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	6	5	Likely breeding
Marsh tit	<i>Poecile palustris</i>	Red List BoCC, SPI	2	1	Probably breeding (one probable/possible territory)
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	10	2	Not breeding (passage record)
Mistle thrush	<i>Turdus viscivorus</i>	Amber List BoCC	1	2	Likely breeding
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	3	1	Breeding nearby
Reed bunting	<i>Emberiza schoeniclus</i>	Amber List BoCC, SPI	3	3	Likely breeding
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	3	5	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	4	5	Likely breeding
Spotted flycatcher	<i>Muscicapa striata</i>	Red List BoCC, SPI	2	1	Probably breeding (one probable/possible territory)
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	2	2	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	2	2	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	2	3	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	2	1	Not breeding on site
Teal	<i>Anas crecca</i>	Amber List BoCC	4	2	Not breeding on site
Tree sparrow	<i>Passer montanus</i>	Red List BoCC, SPI	9	5	Confirmed breeding (three confirmed territories, two probable/possible territories)
Yellow wagtail	<i>Motacilla flava</i>	Red List BoCC, SPI	2	2	Probably breeding (one probable/possible territory)

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	57	5	Likely breeding

### 030-BB1-192062 (arable field to the immediate south of Handsacre)

4.4.200 Within this site, 25 species were recorded of which 11 species are notable. Eight notable species are thought to have bred on site.

Table 107: Records of notable birds recorded within 030-BB1-192062 during the 2013 breeding bird surveys

Common name	Latin name	Status	Maximum number of individuals recorded	Number of survey visits recorded (out of 5)	Breeding status on site
Common whitethroat	<i>Sylvia communis</i>	Amber List BoCC	2	3	Likely breeding
Dunnock	<i>Prunella modularis</i>	Amber List BoCC, SPI	4	5	Likely breeding
House sparrow	<i>Passer domesticus</i>	Red List BoCC, SPI	26	5	Likely breeding
Meadow pipit	<i>Anthus pratensis</i>	Amber List BoCC	41	1	Not breeding (passage record)
Skylark	<i>Alauda arvensis</i>	Red List BoCC, SPI	5	2	Likely breeding
Song thrush	<i>Turdus philomelos</i>	Red List BoCC, SPI	1	1	Likely breeding
Starling	<i>Sturnus vulgaris</i>	Red List BoCC, SPI	7	3	Likely breeding
Stock dove	<i>Columba oenas</i>	Amber List BoCC	1	1	Likely breeding
Swallow	<i>Hirundo rustica</i>	Amber List BoCC	1	1	Breeding nearby
Swift	<i>Apus apus</i>	Amber List BoCC	1	2	Not breeding on site
Yellowhammer	<i>Emberiza citrinella</i>	Red List BoCC, SPI	6	2	Likely breeding

### Barn owl field surveys

4.4.201 Eight sites within CFA22 underwent an initial field survey for barn owls. See Table 44 for details.

### 030-BB3-30 (Arable fields west of Streethay)

4.4.202 This site consisted of arable habitat and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls and no further surveys were carried out.

### 030-BB3-31 (Arable fields west of Streethay)

4.4.203 This site consisted of type 3 arable habitat and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

**030-BB3-032 (Grass and arable fields near Fradley)**

- 4.4.204 This site consisted of Type 3 grassland and arable habitat and appeared poor for small mammals. An investigative field survey found some old evidence of use by barn owls. Surveyors returned to the site to conduct a nest site verification survey but found no recent evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

**030-BB3-033 (Arable fields to west of Fradley)**

- 4.4.205 After barn owl pellets were recorded in a barn on a breeding bird survey an investigative survey combined with a vantage point survey was carried out. The survey found no recent evidence of barn owl and barn owls were not recorded during the vantage point survey. The area is arable habitat and appears poor for small mammal populations. This area was considered unused by barn owls during the breeding season, therefore, no further surveys were carried out.
- 4.4.206 A hobby was seen at 030-BB3-033 during the barn owl surveys. Hobbies (notable for their Schedule 1 status) are falcons that spend their summers in UK. This bird was perched in a tree for roughly an hour at dusk which indicates possible breeding in the area. However, bird surveys of the site have confirmed that hobbies did not breed within the site itself.

**030-BB3-034 (Arable fields to the south of Handsacre)**

- 4.4.207 This site consisted of arable habitat and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

**030-BB3-035 (Grass fields to the south of Handsacre Marina)**

- 4.4.208 This site consisted of Type2 grassland and appeared good for small mammals. An investigative field survey found evidence of use by barn owls within the site; pellets were found in a tree by a pond.
- 4.4.209 Vantage point surveys were considered necessary to ascertain the extent and purpose of use by barn owls.
- 4.4.210 The vantage point surveys found barn owls present on the site. The barn owl was seen hunting in the grassland either side of the tree during the first vantage point survey at the beginning of June. Barn owls were not seen on any of the subsequent surveys.
- 4.4.211 The nest site verification survey found an occasional roost site in a hole in a tree by the pond. Inside the hole were some barn owl pellets. No nest site was identified in this area.
- 4.4.212 A peregrine was seen at 030-BB3-035 during one of the barn owl surveys. Peregrines (notable for their Schedule 1 status) are falcons which are often resident all year round and other only winter in the UK. This bird was an adult male perched on a pylon which indicates possible breeding in the area. However, bird surveys of the site have confirmed that peregrines did not breed within the site itself.



**030-BB3-036 (Arable field to the south of Handsacre)**

- 4.4.213 This site consisted of arable habitat and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

**030-BB3-037 (Farm site near Streethay)**

- 4.4.214 This site consisted of arable habitat and appeared poor for small mammals. An investigative field survey found no evidence of use by barn owls. This area was considered unused by barn owls, therefore, no further surveys were carried out.

*Desk Study*

- 4.4.215 There are no statutory sites within 5km of the route of the Proposed Scheme within the area which have been designated due to their bird populations.
- 4.4.216 There are 24 non-statutory sites within 5km of the route of the Proposed Scheme within CFA22 which mention birds in their designation. None of which are within, or adjacent to, the land required for construction of the Proposed Scheme.
- 4.4.217 A total of nine notable species, have records within 1km of the route of the Proposed Scheme.

Table 108: Records of notable species within 1km of the route of the Proposed Scheme

Common name	Status	Number of records within 1km of the route
Arctic tern	Annex 1, Amber List BoCC	1 record
Brambling	Schedule 1	2 records
Fieldfare	Schedule 1, Red List BoCC	4 records
Green sandpiper	Schedule 1, Amber List BoCC	3 records
Golden plover	Annex 1, Amber List BoCC	2 records
Redwing	Schedule 1, Red List BoCC	3 records
Redshank	Amber List BoCC	1 record
Bewick's swan	Schedule 1, Annex 1, Amber List BoCC, SPI	1 record
Whooper swan	Schedule 1, Annex 1, Amber List BoCC	7 records

- 4.4.218 All of these species are considered to have occurred either on passage or during winter. None of these species are considered likely to have bred within or near the land required for construction of the Proposed Scheme.
- 4.4.219 There are a total of 42 barn owl records within 1.5km of the route of the Proposed Scheme.

Table 109: Barn owl records within 1.5km of the route of the Proposed Scheme

Location	Location details	Records	Distance from the route (m)
Armitage with Handsacre CP	Handsacre	18 records between 2000-2008	860m
Mavesyn Ridware CP	Handsacre Flashes	15 records between 1999-2003	1,110m

Alrewas and Fradley CP	Near EA Offices	December 2001	550m
Curborough and Elmhurst CP	Seedy Mill Golf Course	20/11/2009	720m
Longdon CP	A51	05/07/2003	1,600m
Vicar's Coppice		11/12/2006	140m
Bailey Bridge Wetland and Sitch Covert	Handsacre Flashes	01/01/2003	860m
Lichfield District	Fradley and Streethay CP	Two records in 2011	1,290m
Alrewas and Fradley CP	A38 flyover near Fradley	01/04/2002	1,080m
Curborough and Elmhurst CP	Curborough Antiques Centre	2010	1,150m

### Discussion

- 4.4.220 Breeding populations of notable species were recorded at all 12 sites. However, particularly notable bird populations were recorded at three of the sites (see Table 110).

Table 110: Particularly notable bird species breeding populations recorded within CFA18

Species	Site	Number of confirmed territories	Number of probable territories	Estimated breeding population for West Midlands	Percentage of regional population
Yellow wagtail	BB1-030-182051 and BB1-030-183052	2	1	250-2,500	0.1-1.2%
Lapwing	BB1-030-186054	2	1	250-2,500	0.1-1.2%
Tree sparrow	BB1-030-186054		3	250-2,500	0.1-1.2%
Tree sparrow	BB1-030-190061	3	2	250-2,500	0.2-2%

- 4.4.221 Up to three pairs of yellow wagtail were thought to have bred within the arable fields to the west of Streethay (030-BB1-182051 and BB1-030-183052). The West Midland Bird Club reported breeding of 34-36 pairs in Staffordshire. This species is considered to be widespread within farmland in the West Midlands, and heavily under-recorded due to county records typically focusing specific locations where bird populations are known to be of interest rather than open farmland with no public access. It is considered that the numbers of yellow wagtail territories recorded are likely to be less than 1% of the county population.
- 4.4.222 Up to three pairs of lapwings were thought to have bred at 030-BB1-186054 (Fradley Auction Centre). The West Midland Bird Club reported 305-333 breeding pairs in Staffordshire in 2009. Therefore up to three pairs equates to just below 1% of the county population.
- 4.4.223 Up to three pairs of tree sparrow were thought to have bred at 030-BB1-186054 (Fradley Auction Centre) and up to five pairs at BB1-030-190061 (King's Wharf Bromley marina). The West Midland Bird Club reported confirmed breeding from 13 sites and probable breeding from a further 12 sites. Tree sparrow colonies are well monitored, and even with the assumption of some under-recording, it is considered

that these tree sparrow populations are likely to be greater than 1% the county population.

- 4.4.224 Only one of the sites surveyed for barn owl within the Whittington to Handsacre area was thought to be used by barn owls. A tree within a field to the south of Handsacre (030-BB3-035) is considered to be a roost site for barn owls. The tree lies within the land required for construction of the Proposed Scheme and will be removed. The site provides good foraging and roosting habitat and may fall within a barn owl territory but it is likely that, if at all, the owl nests further afield. The barn owl was seen foraging in the land required for construction of the Proposed Scheme.
- 4.4.225 It is quite possible that barn owls hold territories within areas currently unsurveyed. There are 42 records of barn owls within 1.5km of the route of the Proposed Scheme and there are suitable potential foraging, nesting and roosting areas for barn owl in some of these unsurveyed areas.

## 5 Wintering and passage birds

### 5.1 Introduction

- 5.1.1 This section of the appendix presents details of baseline information relating to wintering and passage birds for the section of the Proposed Scheme that will pass through CFA16 to CFA22 inclusive.

### 5.2 Methodology

- 5.2.1 Details of the standard methodology utilised for wintering bird surveys are provided in Ecology technical note: Ecological field survey methods and standards (Volume 5: Appendix CT-001-000/2).
- 5.2.2 Desk study records relating to wintering birds were obtained from the following sources:
- Warwickshire Biological Record Centre. Species records were only received for barn owl;
  - Staffordshire Ecological Record;
  - EcoRecord (the ecological database for Birmingham and the Black Country);
  - Banbury Ornithological Society;
  - West Midlands Bird Club 2009 Annual Report<sup>46</sup>;
  - Information from local wildlife recorders during meetings arranged by Warwickshire County Council and Warwickshire Wildlife Trust in June and November 2012.
- 5.2.3 Bird records were available from Warwickshire Biological Record Centre, Staffordshire Biological Ecological Records Centre, EcoRecord, and from Banbury Ornithological Society for 10km from the route of the Proposed Scheme.
- 5.2.4 Table 111 summarises those locations where survey for wintering/passage birds was undertaken within CFA16 to CFA22 inclusive.

Table 111; Summary of wintering/passage bird field surveys undertaken in CFA16 to CFA22 inclusive

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-WB1-118001	Oxford Canal	SP415625	Canal	14 November 2012 05 December 2012 02 January 2013 06 February 2013	CFA16
030-WB1-122002	Land at Ladbroke Hill Farm, east of Ladbroke, containing Windmill Hill Spinney	SP428592	Arable farmland	07 November 2012 05 December 2012 02 January 2013 06 February 2013	CFA16

<sup>46</sup> West Midland Bird Club (2011), *The bird of Staffordshire, Warwickshire, Worcestershire and the West Midlands 2009: Annual Report No. 76*. West Midland Bird Club: Suffolk.

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Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-WB1-123003	Land near Harp Farm, north-east of Ladbroke	SP419598	Arable farmland	08 November 2012 06 December 2012 03 January 2013 07 February 2013	CFA16
030-WB1-123004	Land at Harp Farm, north-east of Ladbroke	SP426597	Arable farmland	08 November 2012 06 December 2012 03 January 2013 07 February 2013	CFA16
030-WB1-123005	Land at Harp Farm, north-east of Ladbroke	SP421601	Pasture farmland	08 November 2012 06 December 2012 03 January 2013 07 February 2013	CFA16
030-WB1-126006	Stoney Thorpe Home Farm, east of Ufton	SP401617	Pasture farmland	14 November 2012 28 December 2012 09 January 2013 13 February 2013	CFA16
030-WB1-127007	Land near Stoney Thorpe Home Farm, east of Ufton	SP365624	Pasture farmland	14 November 2012 28 December 2012 09 January 2013 03 February 2013	CFA16
030-WB1-129008	Grand Union Canal	SP385625	Canal	22 November 2012 28 December 2012 09 January 2013 13 February 2013	CFA17
030-WB1-132009	Field's Farm, to the north of Offchurch	SP363671	Arable farmland	15 November 2012 13 December 2012 10 January 2013 14 February 2013	CFA17
030-WB1-135010	Small pocket of woodland at South Cubbington Wood, east of Cubbington	Sp352688	Broad-leaved woodland	15 November 2012 13 December 2012 10 January 2013 14 February 2013	CFA17
030-WB1-135011	Small pocket of woodland at South Cubbington Wood, east of Cubbington	SP350693	Broad-leaved woodland	15 November 2012 12 December 2012 10 January 2013 14 February 2013	CFA17
030-WB1-137012	Park Farm, Stareton	SP339708	Arable farmland	28 November 2012 19 December 2012 23 January 2013 01 March 2013	CFA18
030-WB1-137013	Stoneleigh Park, south of Stoneleigh	SP325720	Grassland, pasture farmland and broad-leaved woodland	21 November 2012 17 December 2012 16 January 2013 20 February 2013	CFA18
030-WB1-141014	Milburn Grange, Kenilworth	SP305737	Arable farmland	28 November 2012 18 December 2012 17 January 2013 21 February 2013	CFA18

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-WB1-142015	Cryfield Grange, between Crackley and Coventry	SP296744	Arable farmland	26 November 2012 17 December 2012 22 January 2013 18 February 2013	CFA18
030-WB1-142016	Crackley Farm, between Crackley and Coventry	SP294739	Pasture farmland	27 November 2012 18 December 2012 22 January 2013 19 February 2013	CFA18
030-WB1-143017	Part of Crackley Wood, between Crackley and Coventry	SP289742	Broad-leaved woodland	27 November 2012 18 December 2012 23 January 2013 19 February 2013	CFA18
030-WB1-144018	Roughknowles Wood, south-west of Coventry	SP289751	Pasture farmland and broad-leaved woodland	26 November 2012	CFA18
030-WB1-162019	Coleshill Manor Office Campus, west of Coleshill	SP185893	Pasture and arable farmland	29 November 2012 20 December 2012 24 January 2013 21 February 2013	CFA19
030-WB1-162020	Grass area adjacent to River Cole and immediately west of Coleshill	SP193896	Pasture farmland	29 November 2012 20 December 2012 24 January 2013 21 February 2013	CFA19
030-WB1-163021	Grass fields south of Water Orton	SP183906	Pasture farmland	22 November 2012 13 December 2012 17 January 2013 21 February 2013	CFA19
030-WB1-163022	Grass fields south of Water Orton	SP183903	Pasture farmland	22 November 2012 13 December 2012 17 January 2013 21 February 2013	CFA19
030-WB1-163023	Arable field south of Water Orton	SP181906	Arable farmland	22 November 2012 13 December 2012 17 January 2013 21 February 2013	CFA19
030-WB1-164024	Coleshill Sewage Treatment Works, Coleshill Industrial Estate	SP192914	Sewage treatment works	22 November 2012 13 December 2012 17 January 2013 21 February 2013	CFA19
030-WB1-166025	Dunton Hall, to the north-east of Curdworth	SP192933	Pasture farmland	22 November 2012 29 December 2012 23 January 2013 27 February 2013	CFA20
030-WB1-167026	Mullensgrove Farm, to the north-east of Curdworth	SP193939	Farm house grounds and large pond	22 November 2012 29 December 2012 23 January 2013 27 February 2013	CFA20

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Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-WB1-167027	Area of woodland off Marston Lane, to the west of Marston	SP194944	Broad-leaved woodland	22 November 2012 29 December 2012 23 January 2013 27 March 2013	CFA20
030-WB1-167028	Lower Mill Plantation, to the west of Marston	SP192950	Arable farmland	22 November 2012 29 December 2012 23 January 2013 27 February 2013	CFA20
030-WB1-168029	Cuttle Mill Fishery, to the west of Marston	SP190950	Fishing lakes	22 November 2012 29 December 2012 23 January 2013 27 February 2013	CFA20
030-WB1-170030	Middleton Hall Farm Quarry, to the southeast of Middleton	SP188974	Quarry lake	29 November 2012 20 December 2012 24 January 2013 28 February 2013	CFA20
030-WB1-171031	Arable field to the immediate north of Middleton	SP175985	Arable farmland	20 November 2012 11 December 2012 15 January 2013 12 February 2013	CFA20
030-WB1-172032	Brook Farm, to the north of Middleton	SP181992	Arable farmland	22 November 2012 10 December 2012 15 January 2013 11 February 2013	CFA21
030-WB1-173033	Hill Farm, west of Drayton Bassett	SK175010	Arable farmland	19 November 2012 10 December 2012 14 January 2013 11 February 2013	CFA21
030-WB1-176034	Arable fields to the south-east of Hints, includes Roundhill Wood);	SP294524	Pasture farmland	30 November 2012 30 December 2012 30 January 2013 28 February 2013	CFA21
030-WB1-177035	Bucks Head Farm, to the east of Weeford	SK152042	Arable and pasture farmland	29 November 2012 29 December 2012 24 January 2013 26 February 2013	CFA21
030-WB1-179036	Packington Moor Farm, including Moor Covert, to the south-west of Whittington Heath	SK144066	Arable and pasture farmland	13 November 2012 04 December 2012 08 January 2013 05 February 2013	CFA21
030-WB1-181037	Whittington Heath Golf Course, Whittington Heath	SK147076	Amenity grassland with pockets of woodland and heathland	21 November 2012 14 December 2012 16 January 2013 20 February 2013	CFA22
030-WB1-183038	Coventry Canal	SK147107	Canal	21 November 2012 13 December 2012 16 January 2013 20 February 2013	CFA22

Ecology survey code	Survey site name and location	OS grid reference	Habitat types included in survey	Survey date(s)	CFA
030-WB1-185039	Orchard Farm, south of Fradley Business Park	SK165135	Arable farmland	12 November 2012 3 December 2012 7 January 2013 4 February 2013	CFA22
030-WB1-186040	Fradley Business Park, South	SK140124	Industrial buildings and arable farmland	12 November 2012 03 December 2012 07 January 2013 04 February 2013	CFA22
030-WB1-188041	Fradley Gorse, west of Fradley	SK133135	Broad-leaved woodland	12 November 2012 03 December 2012 07 January 2013 04 February 2013	CFA22
030-WB1-188042	Ravenshaw Wood, west of Fradley	SK123137	Broad-leaved woodland	19 November 2012 07 December 2012 10 January 2013 13 February 2013	CFA22
030-WB1-189043	Black Slough Wood, west of Fradley	SK137134	Broad-leaved woodland	19 November 2012 07 December 2012 10 January 2013 13 February 2013	CFA22
030-WB1-189044	Arable fields to the south of King's Bromley Wharf Marina)	SK114140	Arable farmland	15 November 2012 05 December 2012 14 January 2013 06 February 2013	CFA22
030-WB1-190045	Arable fields to the immediate west of King's Bromley Wharf Marina	SK109144	Arable farmland	15 November 2012 05 December 2012 03 January 2013 06 February 2013	CFA22
030-WB1-192046	Arable field to the immediate south of Handsacre	SK095151	Arable farmland	15 November 2012 05 December 2012 03 January 2013 06 February 2013	CFA22

## Evaluation

- 5.2.5 All records of Schedule 1<sup>47</sup> and Annex 1<sup>48</sup> species (with the exception of those species such as redwing and fieldfare that are only Schedule 1 due to their rarity as breeding species and not as wintering birds) and other species recorded at levels of county/metropolitan value are shown in Volume 5: Map Book – Ecology, Maps EC-09.
- 5.2.6 There are no standard processes for assessing wintering birds. On the basis of limited data collected over one winter only, initial attempts at analysis confirm that it is not appropriate to apply any fixed criteria in a rigid way and assessments need to take into

<sup>47</sup> Specially protected or Schedule 1 birds receive full protection under the Wildlife and Countryside Act 1981 (as amended). In addition to the protection from killing or taking that all birds, their nests and eggs have under the Act, Schedule 1 birds and their young must not be disturbed at the nest.

<sup>48</sup> Species listed on Annex I of the Council Directive 92/43/EEC on the Conservation of natural habitats and of wild fauna and flora (the Habitats Directive). This is the means by which the European Community meets its obligations as a signatory of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention). In the UK the Directive has been transposed into national laws by means of the Conservation (Natural Habitats, & c.) Regulations 1994 (as amended) as consolidated by The Conservation of Habitats and Species Regulations 2010 (as amended – the Habitats Regulations). Annex I species are rare/threatened on a European level.



account professional judgement. However, the basis of bird evaluation for the EIA is outlined as follows:

- where a set of surveys clearly indicates that a site does not regularly support any notable species and the number and variety of birds is below the expected for such an area, it can be identified as having negligible value, but this would be by exception rather than as a rule;
- it is concluded that professional judgement is the only reasonable way to identify local/parish valuation of a survey area. Any area that holds a typical number and assemblage of species for that habitat in the area in question should be considered to be of local value. This evaluation would take into account the notable status of species;
- there is no easy way to identify a population as being of district/borough importance. However, where such an area cannot clearly be shown to be of county/metropolitan importance on the basis described above, but nevertheless is demonstrably of greater value on the basis of the numbers and variety of species present than the majority of those areas identified as of local/parish value, it has been considered to be of district/borough value;
- if a site regularly supports at least 1% of the county population of a species, based on available breeding population estimates for the County, then it is valued as being of county/metropolitan value. However, there are two caveats to this. Firstly, there are reasons to believe that County estimates are often very low for dispersed species such as woodcock, lesser redpoll, and lapwing. Hence the recent UK population estimates given in Musgrove et al (2013) (British Birds February edition) have also been taken into account when considering whether the published County estimate is likely to be a significant underestimate. It was noted, for example, that the much under-recorded and widespread woodcock has a winter population estimated to be 1.4 million; hence most Counties are likely to support many thousands despite low numbers being recorded by birders. This requires a degree of professional judgement. Secondly, the number of surveys that have been undertaken is low and covers one winter/passage season only. Hence it is not realistically possible to determine whether the species that were recorded are/are not regularly present in the numbers recorded; and
- if a site regularly supports at least 1% of the national population of a species, based on national wintering population estimates, then it is valued as being of national value.

5.2.7 For those species that are included on Schedule 1 or on the BoCC list only on account of their status as rare breeding birds in the UK, they should not normally be mentioned in the context of the assessment for wintering populations. For example, redwing and fieldfare are on both lists on this basis, whereas their estimated UK winter populations are 690, 000 and 720,000 respectively. However, for any species that are not listed on BoCC for winter populations, but nevertheless have low populations in the UK, they may be relevant to the assessment and should be discussed. An example is green sandpiper, which has an estimated UK wintering population of only 910.

5.2.8 Regional wintering population estimates have been taken from the West Midland Bird Club 2009 report<sup>49</sup>. The regional wintering status provides an approximate range of bird numbers overwintering. The lower limit of this range has been used to identify if a site potentially supports 1% of the county estimate. The following breeding status categories have been taken from the West Midland Bird Club 2009 report:

- Very rare                      fewer than 10 records ever;
- Rare                            breeding less than annually;
- Scarce                        fewer than 20 birds occurring per annum;
- Uncommon                  20-100 birds occurring;
- Frequent                    100-500 birds occurring;
- Fairly common            500-5,000 birds occurring;
- Common                    5,000-20,000 birds occurring;
- Very common            20,000-50,000 birds occurring; and
- Abundant                    50,000+ birds occurring.

## 5.3 Deviations, constraints and limitations

- 5.3.1 Access was limited to a number of land parcels along the Proposed Scheme. However it is estimated that approximately 42% of the land along the route of the Proposed Scheme was surveyed, including a representative variety of habitats found within the land required for construction of the Proposed Scheme.
- 5.3.2 The habitats within the land required for construction of the Proposed Scheme within the area are considered to be fairly typical of the region, consisting mainly of arable and grass farmland, with pockets of woodland and some areas of water.
- 5.3.3 Surveys were carried out in a range of weather conditions, with the exception of fog. It was necessary for visibility to be sufficient to allow fields to be scanned for birds.
- 5.3.4 Table 112 identifies those survey locations which were scoped as requiring wintering/passage bird survey, but access was not forthcoming in time to allow field survey during the available 2012/2013 survey window.

Table 112: Summary of wintering/passage bird field surveys where no access was available

Survey site name and location	OS grid reference	Description of proposed survey location and reason for identifying requirement for survey	CFA
Fish ponds near Lower Radbourne, south-east of Ladbroke	SP441570	Fish ponds with potential to attract birds	CFA16
South-east of Ladbroke	SP443580	Arable farmland representative of typical farmland in the local area	CFA16

<sup>49</sup> West Midland Bird Club (2011), *The birds of Staffordshire, Warwickshire, Worcestershire and the West Midlands 2009: Annual Report No. 76*. West Midland Bird Club: Suffolk.

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Survey site name and location	OS grid reference	Description of proposed survey location and reason for identifying requirement for survey	CFA
Ladbroke Grove Farm, Ladbroke	SP434583	Arable farmland representative of typical farmland in the local area and Ladbroke Fox Covert woods	CFA16
Starbold Farm, south of Southam	SP412600	Arable farmland representative of typical farmland in the local area	CFA16
Ufton and Long Itchington Wood	SP388627	Broadleaved woodland within Proposed Scheme and designated as Site of Special Scientific Interest (SSSI) with birds mentioned in citation	CFA16
Arable land at Woodmeadow Farm, north-east of Ufton	SP385633	Arable farmland representative of typical farmland in the local area	CFA16
Burnt Heath Farm, east of Offchurch	SP374654	Arable farmland representative of typical farmland in the local area and included plantation woodland and reservoir at Burnt Firs	CFA16
South Cubbington Wood, north-east of Cubbington	SP352685	Broad-leaved woodland within Proposed Scheme	CFA17
North Cubbington Wood, north-east of Cubbington	SP350693	Mainly coniferous woodland, just outside Proposed Scheme	CFA17
Land around South Hurst Farm, including Broadwell's Wood, to the southwest of Coventry	S280751	Arable farmland representative of typical farmland in the local area, including an area of woodland	CFA18
Grass fields to the immediate north of Gilson Hall	SP190905	Pasture farmland representative of typical farmland in the local area	CFA19
Grass playing fields to the north of Gilson Hall, Gilson	SP189909	Amenity grassland area	CFA19
Middleton House farm and North Wood, east of Sutton Coldfield	SP190956	Arable farmland representative of typical farmland in the local area and broadleaved woodland within Proposed Scheme	CFA20
Park Gate Farm	SP186985	Arable farmland representative of typical farmland in the local area with a small reservoir	CFA20
Hill Farm, Lichfield	SK145101	Mixture of arable and pasture farmland representative of typical farmland in the local area, includes Fulfen Wood	CFA22
Big Lyntus woodland, north of Curborough	SK131129	Broadleaved woodland adjacent to Proposed Scheme	CFA22
Arable fields to the west of Streethay	SK155080	Arable farmland representative of typical farmland in the local area	CFA22
Arable fields to the west of Streethay	SK151086	Arable farmland representative of typical farmland in the local area	CFA22
Arable habitat to the west of Fradley	SK132141	Arable farmland representative of typical farmland in the local area	CFA22
Ashton Hays Farm, south of Handsacre	SK101146	Arable farmland representative of typical farmland in the local area, including Harvey's Rough broad-leaved coppice	CFA22

## 5.4 Baseline

### CFA16 Ladbroke and Southam

- 5.4.1 Four sites were surveyed within CFA16 for wintering birds, totalling an area of approximately 173.6ha:
- 030-WB1-118001; Oxford Canal, 4.0ha;
  - 030-WB1-122002; arable, 70.7ha (land at Ladbroke Hill Farm, east of Ladbroke, containing Windmill Hill Spinney);
  - 030-WB1-123003, 030-WB1-123004 and 030-WB1-123005; arable (39.9ha) and grass (13.0ha), (fields at Harp Farm, north-east of Ladbroke); and
  - 030-WB1-126006 and 030-WB1-127007; grassland, 46.0ha (Stoney Thorpe Home Farm, east of Ufton).
- 5.4.2 A total of 65 species were recorded within the study area during the winter 2012/13 surveys, of which 33 are notable:
- forty-six species were recorded along the Oxford Canal (030-WB1-118001), of which 21 species are notable;
  - forty-six species were recorded at Ladbroke Hill Farm (030-WB1-122002), of which 25 species are notable;
  - forty-six species were recorded within the fields at Harp Farm (030-WB1-123003, 030-WB1-123004 and 030-WB1-123005), of which 23 species are notable; and
  - forty-nine species were recorded at Stoney Thorpe Home Farm (030-WB1-126006 and 030-WB1-127007), of which 21 species are notable.

Table 113: The maximum count of notable bird species recorded within CFA16 during winter bird surveys. Total number of surveys recorded (out of four) is shown in brackets

Species	Notable status	Site reference				Regional abundance
		030-WB1-118001	030-WB1-122002	030-WB1-123003, 030-WB1-123004 and 030-WB1-123005	030-WB1-126006 and 030-WB1-127007	
Barn owl	Schedule 1, Amber List BoCC		1 (1)			Frequent
Black-headed gull	Amber List BoCC	7 (3)	17 (3)	6 (1)	520 (4)	Abundant
Brambling	Schedule 1	19 (3)		21 (2)		Fairly common
Bullfinch	Amber List BoCC, SPI	10 (4)	8 (4)	8 (3)	4 (2)	Common
Common gull	Amber List BoCC		4 (1)		3 (1)	Common
Duncock	Amber List BoCC, SPI	3 (4)	6 (4)	11 (4)	5 (4)	Abundant

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Species	Notable status	Site reference				Regional abundance
		030-WB1-118001	030-WB1-122002	030-WB1-123003, 030-WB1-123004 and 030-WB1-123005	030-WB1-126006 and 030-WB1-127007	
Fieldfare	Schedule 1, Red List BoCC	125 (4)	1179 (4)	2225 (4)	210 (4)	Abundant
Golden plover	Annex 1, Amber List BoCC	189 (2)		4 (1)		Common
Great black-backed gull	Amber List BoCC				2 (3)	Fairly common
Green sandpiper	Schedule 1, Amber List BoCC	1 (1)				Frequent
Green woodpecker	Amber List BoCC	1 (1)	2 (4)	1 (2)	1 (3)	Fairly common
Herring gull	Red List BoCC, SPI		3 (1)		200 (4)	Common
House sparrow	Red List BoCC, SPI			6 (3)		Abundant
Kestrel	Amber List BoCC	1 (2)	2 (3)	1 (4)	1 (1)	Fairly common
Lapwing	Red List BoCC, SPI			22 (1)		Common
Lesser black-backed gull	Amber List BoCC	1 (1)	5 (1)		350 (4)	Very common
Lesser redpoll	Red List BoCC, SPI	7 (2)	3 (1)	9 (2)	3 (1)	Fairly common
Linnet	Red List BoCC, SPI	8 (2)	27 (4)	262 (4)		Partial migrant, fewer in winter
Little grebe	Amber List BoCC				1 (1)	Fairly common
Mallard	Amber List BoCC	4 (1)			4 (2)	Common
Meadow pipit	Amber List BoCC		2 (1)		1 (1)	Fairly common
Mistle thrush	Amber List BoCC	2 (2)	2 (2)	1 (3)	4 (4)	Common
Peregrine	Schedule 1, Annex 1		1 (1)			Uncommon
Redwing	Schedule 1, Red List BoCC	35 (4)	222 (4)	419 (4)	74 (4)	Abundant
Reed bunting	Amber List BoCC, SPI		16 (3)	4 (2)	1 (1)	Common

Species	Notable status	Site reference				Regional abundance
		030-WB1-118001	030-WB1-122002	030-WB1-123003, 030-WB1-123004 and 030-WB1-123005	030-WB1-126006 and 030-WB1-127007	
Skylark	Red List BoCC, SPI	58 (1)	67 (4)	10 (3)		Abundant
Snipe	Amber List BoCC		1 (1)	1 (1)		Fairly common
Song thrush	Red List BoCC, SPI	1 (3)	6 (4)	8 (4)	2 (4)	Abundant
Starling	Red List BoCC, SPI	31 (3)	385 (4)	656 (4)	444 (3)	Very common to abundant
Stock dove	Amber List BoCC	1 (3)	20 (4)	4 (3)	8 (3)	Very common
Tree sparrow	Red List BoCC, SPI	2 (1)	1 (1)	3 (2)		Fairly common
Woodcock	Amber List BoCC		1 (2)	1 (1)		Frequent or fairly common
Yellowhammer	Red List BoCC, SPI	25 (4)	41 (4)	88 (4)	1 (2)	Very common to abundant

### Desk study

- 5.4.3 There are two statutory sites within 5km of the route of the Proposed Scheme within the area which mention birds in their designation.
- 5.4.4 Ufton Fields SSSI lies over 500m from the route of the Proposed Scheme and is a mosaic of grassland, marshes and pools noted for its flora, invertebrates and birdlife. Wetland breeding birds are listed on the citation include little grebe, snipe and water rail. This site is not within, or adjacent to, land required for construction of the Proposed Scheme. The route of the Proposed Scheme is in tunnel beneath Long Itchington and Ufton Woods SSSI. The SSSI is oak-hazel coppiced woodland, supporting a range of common woodland breeding bird species. No particularly sensitive or notable wintering species were listed in the citation.
- 5.4.5 There are eight non-statutory sites within 5km of the route of the Proposed Scheme within CFA16 which mention birds in their designation. These sites are not within, or adjacent to, land required for construction of the Proposed Scheme.

Table 114: Notable species records for CFA16

Species	Status	Number of records within 1km of the route
Arctic skua	Red List BoCC, SPI	1
Arctic tern	Annex 1, Amber List BoCC	1
Black-headed gull	Amber List BoCC	7
Brambling	Schedule 1	3

Species	Status	Number of records within 1km of the route
Black redstart	Schedule 1, Amber List BoCC	1
Kestrel	Amber List BoCC	1

5.4.6 Of the species recorded by the Banbury Ornithological Society, black-headed gull, brambling and kestrel are thought to have potentially over winter within 1km of the route of the Proposed Scheme. Arctic skua, arctic tern and black redstart are considered to have been rare passage records.

5.4.7 Black-headed gull, brambling and kestrel were all recorded during the 2012/2013 wintering bird surveys.

5.4.8 Eight barn owl records have been received within 1.5km of the route of the Proposed Scheme. See Section 4 for further details.

5.4.9 Anecdotal information obtained from local recorders during a meeting with Warwickshire Wildlife Trust and Warwickshire County Council identified a migratory raptor route along the ridgeway at Long Itchington and Ufton Woods.

### *Discussion*

5.4.10 Wintering populations of notable species were recorded at all four sites. However, only one particularly notable bird population was recorded: a barn owl was recorded at 030-WB1-122002 around midday and is therefore thought to have a winter roost nearby.

### **CFA17: Offchurch and Cubbington**

5.4.11 Three sites were surveyed within CFA17 for wintering birds, totalling an area of approximately 138.6ha:

- 030-WB1-129008: Canal, 7.0ha (Grand Union Canal);
- 030-WB1-132009: Arable, 129.5ha (Field's Farm, to the north of Offchurch);
- 030-WB1-135010 and 030-WB1-135011: Woodland, 2.1ha (two small pockets of woodland at South Cubbington Wood, east of Cubbington).

5.4.12 A total of 59 species were recorded within CFA17 during the winter 2012/13 surveys, of which 26 are notable:

- forty-eight species were recorded along the Grand Union Canal (030-WB1-129008), of which 18 species are notable;
- forty-nine species were recorded at Field's Farm (030-WB1-131009), of which 23 species are notable; and
- twenty species were recorded with South Cubbington Wood (030-WB1-135010 and 030-WB1-135011), of which five species are notable.

Table 115: The maximum count of notable bird species recorded within CFA17 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>50</sup>			Regional status
		030-WB1-129008	030-WB1-132009	030-WB1-135010 and 030-WB1-135011	
Black-headed gull	Amber List BoCC	5 (1)	9 (3)		Abundant
Bullfinch	Amber List BoCC, SPI	8 (3)	3 (4)	1 (1)	Common
Common gull	Amber List BoCC		4 (2)		Common
Dunnock	Amber List BoCC, SPI	2 (3)	16 (4)	1 (4)	Abundant
Fieldfare	Schedule 1, Red List BoCC	62 (3)	222 (4)		Abundant
Golden plover	Annex 1, Amber List BoCC		81 (3)		Common
Green woodpecker	Amber List BoCC	2 (3)	1 (1)		Fairly common
Grey wagtail	Amber List BoCC	1 (1)			Fairly common
House sparrow	Red List BoCC, SPI		7 (1)		Abundant
Kingfisher	Schedule 1, Annex 1, Amber List BoCC		1 (1)		Fairly common
Lapwing	Red List BoCC, SPI	69 (1)	21 (2)		Common
Lesser black-backed gull	Amber List BoCC	11 (1)	2 (1)		Very common
Lesser redpoll	Red List BoCC, SPI	2 (1)	5 (1)	1 (1)	Fairly common
Lesser spotted woodpecker	Red List BoCC, SPI	1 (1)			Frequent to fairly common
Linnet	Red List BoCC, SPI	5 (1)	4 (4)		Partial migrant, fewer in winter
Mallard	Amber List BoCC	14 (4)	12 (4)		Common
Mistle thrush	Amber List BoCC		2 (4)		Common
Redwing	Schedule 1, Red List BoCC	55 (4)	51 (4)	9 (1)	Abundant
Reed bunting	Amber List BoCC, SPI		7 (2)		Common
Skylark	Red List BoCC, SPI	1 (1)	137 (3)		Abundant
Snipe	Amber List BoCC		3 (1)		Fairly common
Song thrush	Red List BoCC, SPI	2 (3)	24 (4)	1 (2)	Abundant
Starling	Red List BoCC, SPI	35 (1)	136 (4)		Very common to abundant
Stock dove	Amber List BoCC	1 (1)	3 (2)		Very common
Willow tit	Red List BoCC, SPI	1 (1)			Fairly common

<sup>50</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.



Species	Notable status	Site reference/total number of surveys <sup>50</sup>			Regional status
		030-WB1-129008	030-WB1-132009	030-WB1-135010 and 030-WB1-135011	
Yellowhammer	Red List BoCC, SPI		40 (4)		Very common to abundant

### *Desk study*

- 5.4.13 There are no statutory sites within 5km of the route of the Proposed Scheme within CFA17 which have been designated due to their bird populations.
- 5.4.14 There are seven non-statutory sites within 5km of the route of the Proposed Scheme within CFA17 which mention birds in their designation. Of these, South Cubbington Wood falls within the Proposed Scheme and will be directly impacted. However the designation for South Cubbington Wood only mentions historic records of breeding nightingale from 1980.
- 5.4.15 There are no records of barn owls within 1.5km of the route of the Proposed Scheme.

### *Discussion*

- 5.4.16 Wintering populations of notable species were recorded within all three sites.
- 5.4.17 No regularly occurring notable wintering bird populations considered to be 1% or more of the county population<sup>51</sup> were recorded, although a lesser-spotted woodpecker and willow tit recorded along the Grand Union Canal are of interest, and the canal may form part of their wide ranging winter territories.

### **CFA18: Stoneleigh, Kenilworth and Burton Green**

- 5.4.18 Seven sites were surveyed within CFA18 for wintering birds, totalling an area of approximately 524ha:
- 030-WB1-137012; arable, 74.5ha (Park Farm, Stareton);
  - 030-WB1-137013; grassland (219ha) and woodland (20ha) (Stoneleigh Park, south of Stoneleigh);
  - 030-WB1-141014; arable 74.5ha (Milburn Grange, Kenilworth);
  - 030-WB1-142015; arable, 90.5ha (Cryfield Grange, between Crackley and Coventry);
  - 030-WB1-142016; grassland, 33.8ha (Crackley Farm, between Crackley and Coventry);
  - 030-WB1-143017; woodland, 2.1ha (part of Crackley Wood, between Crackley and Coventry); and
  - 030-WB1-144018; grassland (3.8ha) and woodland (5.9ha) (Roughknowles Wood, south-west of Coventry).

<sup>51</sup> County estimates have been established based on regional estimates of the 2009 West Midland Breeding Bird Report and UK estimates taken from Musgrove et al. (2013).

5.4.19 A total of 69 species were recorded within CFA18 during the winter 2012/13 surveys, of which 32 are notable:

- forty-seven species were recorded at Park Farm (030-WB1-137012), of which 20 species are notable;
- fifty-eight species were recorded at Stoneleigh Park (030-WB1-137013), of which 26 species are notable;
- fifty-six species were recorded at Milburn Grange (030-WB1-141014), of which 26 species are notable;
- forty species were recorded at Cryfield Grange (030-WB1-142015), of which 15 species are notable;
- thirty-nine species were recorded at Crackley Farm (030-WB1-142016), of which 16 species are notable;
- twenty-one species were recorded within part of Crackley Wood (030-WB1-143017), of which three species are notable; and
- fifteen species were recorded within Rough Knowles Wood (030-WB1-144018), of which none are notable.

Table 116: The maximum count of notable bird species recorded within CFA18 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>52</sup>							Regional status
		030-WB1-137012	030-WB1-137013	030-WB1-141014	030-WB1-142015	030-WB1-142016	030-WB1-143017	030-WB1-144018	
Black-headed gull	Amber List BoCC	6 (2)	43 (4)	45 (4)	2 (2)	2 (1)			Abundant
Brambling	Schedule 1			2 (2)					Fairly common
Bullfinch	Amber List BoCC, SPI	5 (4)	9 (4)	3 (2)	6 (2)				Common
Common gull	Amber List BoCC	2 (1)	15 (1)	2 (1)	1 (1)				Common
Dunnock	Amber List BoCC, SPI	11 (4)	8 (4)	9 (4)	3 (2)	5 (3)			Abundant
Fieldfare	Schedule 1, Red List BoCC	161 (4)	67 (4)	32 (4)	48 (2)	81 (2)			Abundant
Golden plover	Annex 1, Amber List BoCC		23 (1)						Common
Green woodpecker	Amber List BoCC		2 (3)	2 (2)		1 (1)			Fairly common
Grey wagtail	Amber List BoCC		1 (1)	1 (2)					Fairly common

<sup>52</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.

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Species	Notable status	Site reference/total number of surveys <sup>52</sup>							Regional status
		030-WB1-137012	030-WB1-137013	030-WB1-141014	030-WB1-142015	030-WB1-142016	030-WB1-143017	030-WB1-144018	
Herring gull	Red List BoCC, SPI	2 (1)	4 (1)	6 (2)					Common
House sparrow	Red List BoCC, SPI			32 (4)		1 (1)			Abundant
Kestrel	Amber List BoCC	1 (2)	3 (3)	3 (3)	1 (2)				Fairly common
Kingfisher	Schedule 1, Annex 1, Amber List BoCC		1 (2)	1 (3)					Fairly common
Lapwing	Red List BoCC, SPI		131 (1)	34 (1)					Common
Lesser black-backed gull	Amber List BoCC	7 (2)							Very common
Lesser redpoll	Red List BoCC, SPI	16 (4)	4 (2)	30 (3)	1 (2)	3 (1)			Fairly common
Linnet	Red List BoCC, SPI	21 (4)	5 (2)	14 (2)		30 (2)			Partial migrant, fewer in winter
Little grebe	Amber List BoCC		1 (1)						Fairly common
Mallard	Amber List BoCC	5 (1)	16 (4)	10 (4)	4 (4)	7 (1)			Common
Marsh tit	Red List BoCC, SPI					2 (1)	1 (1)		Fairly common
Meadow pipit	Amber List BoCC		11 (1)		50 (1)				Fairly common
Mistle thrush	Amber List BoCC	1 (1)	3 (3)	5 (4)		3 (1)			Common
Redwing	Schedule 1, Red List BoCC	13 (3)	93 (4)	55 (4)	9 (2)	230 (2)	56 (2)		Abundant
Reed bunting	Amber List BoCC, SPI	1 (1)	1 (1)		2 (1)				Common
Skylark	Red List BoCC, SPI	10 (2)	14 (1)	76 (3)	12 (3)	4 (1)			Abundant
Snipe	Amber List BoCC	1 (1)		1 (2)					Fairly common
Song thrush	Red List BoCC, SPI	9 (3)	9 (4)	10 (4)	3 (4)	1 (2)	1 (1)		Abundant
Starling	Red List BoCC, SPI	100 (4)	60 (4)	32 (4)	1 (1)	86 (2)			Very common to abundant

Species	Notable status	Site reference/total number of surveys <sup>52</sup>							Regional status
		030-WB1-137012	030-WB1-137013	030-WB1-141014	030-WB1-142015	030-WB1-142016	030-WB1-143017	030-WB1-144018	
Stock dove	Amber List BoCC	4 (3)	1 (2)	74 (3)					Very common
Teal	Amber List BoCC		3 (2)	17 (1)		1 (1)			Common
Tree sparrow	Red List BoCC, SPI			1 (1)					Fairly common
Yellowhammer	Red List BoCC, SPI	12 (4)	8 (2)	8 (4)	18 (4)	2 (1)			Very common to abundant

### Desk study

- 5.4.20 There are no statutory sites within 5km of the route of the Proposed Scheme within CFA18 which have been designated due to their bird populations.
- 5.4.21 There are 16 non-statutory sites within 5km of the Proposed Scheme within CFA18 which mention birds in their designation. Of these, Broadwells Wood Wildlife Site and Big Pools and Little Pools Wood Site of Importance for Nature Conservation will be directly impacted by the Proposed Scheme. These sites only have common woodland birds listed in their designation.
- 5.4.22 There are no records of barn owls within 1.5km of the route of the Proposed Scheme.

### Discussion

- 5.4.23 Wintering populations of notable species were recorded within six of the seven sites surveyed. No regularly occurring notable bird populations considered to support 1% or more of the estimated county population were recorded.
- 5.4.24 Large counts of up to 30 lesser redpolls were recorded at Milburn Grange (030-WB1-141014) on three occasions. However, due to an estimate of 220,000 lesser redpolls overwintering in the UK (Musgrove et al., 2013) this is thought to be just under 1% of the county population.

### CFA19: Coleshill Junction

- 5.4.25 Four sites were surveyed within CFA19 for wintering birds, totalling an area of approximately 186ha:
- 030-WB1-162019; grassland and arable, 79.2ha (Coleshill Manor Office Campus, west of Coleshill);
  - 030-WB1-162020; grassland, 14.5ha (grass area adjacent to River Cole and immediately west of Coleshill);
  - 030-WB1-163021, 030-WB1-163022 and 030-WB1-163023; arable (6.4ha) and grass (24.2ha), (fields to the south of Water Orton); and
  - 030-WB1-164024; sewage works, 59.6ha (Coleshill Sewage Treatment Works, Coleshill Industrial Estate).

5.4.26 A total of 61 species were recorded within CFA19 during the winter 2012/13 surveys, of which 28 are notable:

- thirty-eight species were recorded at Coleshill Manor Office Campus (030-WB1-162019) of which 16 species are notable;
- twenty-one species were recorded within a grass area adjacent to River Cole (030-WB1-162020) of which four species are notable;
- forty species were recorded within arable and grass fields to the south of Water Orton (030-WB1-163021, 030-WB1-163022 and 030-WB1-163023) of which 19 species are notable; and
- forty-nine species were recorded at Coleshill Sewage Treatment Works (030-WB1-164024) of which 20 species are notable.

Table 117: The maximum count of notable bird species recorded within CFA19 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>53</sup>				Regional status
		030-WB1-162019	030-WB1-162020	030-WB1-163021, 030-WB1-163022 and 030-WB1-163023	030-WB1-164024	
Black-headed gull	Amber List BoCC	147 (3)		7 (2)	103 (4)	Abundant
Bullfinch	Amber List BoCC, SPI			5 (1)	4 (1)	Common
Common gull	Amber List BoCC	1 (2)				Common
Dunnock	Amber List BoCC, SPI	4 (2)		9 (4)	14 (4)	Abundant
Fieldfare	Schedule 1, Red List BoCC	67 (3)	5 (1)	23 (3)		Abundant
Gadwall	Amber List BoCC				10 (3)	Frequent and increasing
Green sandpiper	Schedule 1, Amber List BoCC				1 (2)	Frequent
Green woodpecker	Amber List BoCC	1 (1)		1 (1)		Fairly common
Grey wagtail	Amber List BoCC				6 (4)	Fairly common
House sparrow	Red List BoCC, SPI	1 (1)	1 (2)	14 (3)		Abundant
Kestrel	Amber List BoCC	1 (1)	1 (3)	1 (1)	1 (1)	Fairly common
Lapwing	Red List BoCC, SPI	30 (1)				Common
Lesser black-backed gull	Amber List BoCC	1 (1)		2 (1)	2 (1)	Very common
Lesser redpoll	Red List BoCC, SPI	3 (1)		1 (1)	1 (1)	Fairly common

<sup>53</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.

Species	Notable status	Site reference/total number of surveys <sup>53</sup>				Regional status
		030-WB1-162019	030-WB1-162020	030-WB1-163021, 030-WB1-163022 and 030-WB1-163023	030-WB1-164024	
Linnet	Red List BoCC, SPI				32 (2)	Partial migrant, fewer in winter
Little grebe	Amber List BoCC				3 (2)	Fairly common
Mallard	Amber List BoCC	11 (3)		9 (2)	38 (4)	Common
Meadow pipit	Amber List BoCC			5 (1)		Fairly common
Redwing	Schedule 1, Red List BoCC	60 (3)	13 (4)	11 (4)	10 (3)	Abundant
Reed bunting	Amber List BoCC, SPI			2 (1)	5 (2)	Common
Snipe	Amber List BoCC	1 (1)		1 (1)	1 (1)	Fairly common
Song thrush	Red List BoCC, SPI			4 (4)	6 (3)	Abundant
Starling	Red List BoCC, SPI	30 (2)		45 (3)	7 (2)	Very common to abundant
Stock dove	Amber List BoCC			8 (2)	2 (3)	Very common
Teal	Amber List BoCC				21 (4)	Common
Tufted duck	Amber List BoCC				4 (1)	Common
Woodcock	Amber List BoCC	1 (1)		1 (1)		Frequent or fairly common
Yellowhammer	Red List BoCC, SPI	1 (1)		36 (4)		Very common to abundant

### Desk study

- 5.4.27 There are no statutory sites within 5km of the route of the Proposed Scheme within CFA19 which have been designated due to their bird populations.
- 5.4.28 There are five non-statutory sites within 5km of the route of the Proposed Scheme within CFA19 which mention birds in their designation. Of these Coleshill Park Belt Local Wildlife Site will be directly impacted by the Proposed Scheme. Common farmland and woodland birds are listed in the designation, all of which have been recorded during the winter bird surveys.
- 5.4.29 Wheeley Moor Farm Meadows Local Wildlife Site is within 5m of the land required for the construction of the Proposed Scheme. However, only common farmland and scrub species are noted in the designation.
- 5.4.30 There is one record of barn owl within 1.5km of the route of the Proposed Scheme within CFA19. See Section 4 for details.

### Discussion

5.4.31 Wintering populations of notable species were recorded within all of the sites surveyed. However, only one regularly occurring notable bird population considered to be supporting 1% or more of the estimated county population was recorded: an overwintering green sandpiper at Coleshill Sewage Treatment Works (030-WB1-164024).

5.4.32 In addition, the wintering gadwall population at Coleshill Sewage Treatment Works was thought to be just under 1% of the county estimate.

Table 118: Notable bird species with wintering populations potentially recorded at 1% of county population or above within CFA19

Species	Site	Maximum number of birds recorded	Number of surveys present (out of 4 visits)	Estimated wintering population for West Midlands	Percentage of regional population	Comments
Gadwall	030-WB1-164024	10	3	100-500	1-10%	With an estimate of 25,000 gadwall overwintering in the UK, the lower range of the regional estimate is thought to be a significant underestimate. Therefore this site is thought to support under 1% of the county population of wintering gadwall.
Green sandpiper	030-WB1-164024	1	2	20	5%	A single green sandpiper was recorded on two of the surveys and it is considered likely this bird overwintered, therefore the site regularly supports 1% of the estimated county population of wintering green sandpipers.

### CFA20: Curdworth to Middleton

5.4.33 Seven sites were surveyed within the CFA20 for wintering birds, totalling an area of approximately 164Ha:

- 030-WB1-166025; pasture, 37.3ha (Dunton Hall, to the north-east of Curdworth);
- 030-WB1-167026; wetland (farm pond), 0.7ha (Mullensgrove Farm, to the north-east of Curdworth);
- 030-WB1-167027; woodland, 12.9ha (area of woodland off Marston Lane, to the west of Marston);
- 030-WB1-167028; arable, 23.4ha (Lower Mill Plantation, to the west of Marston);
- 030-WB1-168029; wetland (fishing lakes), 5.3ha (Cuttle Mill Fishery, to the west of Marston);
- 030-WB1-170030; wetland (quarry lakes), 9.0ha (Middleton Hall Farm Quarry, to the south-east of Middleton); and
- 030-WB1-171031; arable, 74.9ha (arable field to the immediate north of Middleton).

- 5.4.34 In addition, two vantage points were located within CFA20. These were surveyed between October 2012 and February 2013, recording flights of notable waterbirds. Vantage points were located at Lower Mill Plantation (covering the potential flight path between the water bodies at Cuttle Mill Fishery and Kingsbury Water Park) and Middleton Hall Farm Quarry (covering the potential flight path between the water bodies at Middleton Hall Farm Quarry, Middleton Pool and Middleton Lakes RSPB reserve).
- 5.4.35 A total of 72 species were recorded within CFA20 during the winter 2012/13 surveys, of which 40 are notable:
- thirty-six species were recorded at Dunton Hall (030-WB1-166025), of which 18 species are notable;
  - twenty-four species were recorded at Mullensgrove Farm (030-WB1-167026), of which nine species are notable;
  - thirty-seven species were recorded at Lower Mill Plantation (030-WB1-167028), of which 19 species are notable;
  - thirty-four species were recorded at Cuttle Mill Fishery (030-WB1-168029), of which 12 species are notable;
  - forty-nine species were recorded at Middleton Hall Farm Quarry (030-WB1-170030), of which 24 species are notable; and
  - thirty species were recorded within an arable field to the immediate north of Middleton (030-WB1-171031), of which 11 species are notable.

Table 119: The maximum count of notable bird species recorded within CFA20 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>54</sup>							Regional status
		030-WB1-166025	030-WB1-167026	030-WB1-167027	030-WB1-167028	030-WB1-168029	030-WB1-170030	030-WB1-171031	
Black-headed gull	Amber List BoCC	30 (4)	7 (1)	1 (1)	15 (3)	14 (4)	77 (4)		Abundant
Brambling	Schedule 1					2 (1)			Fairly common
Bullfinch	Amber List BoCC, SPI	2 (4)		4 (2)			6 (4)	1 (1)	Common
Common gull	Amber List BoCC	1 (1)							Common
Corn bunting	Red List BoCC, SPI	1 (1)							Fairly common
Dunnock	Amber List BoCC, SPI	14 (3)	2 (1)	2 (2)	1 (1)	3 (1)	3 (4)	4 (3)	Abundant
Fieldfare	Schedule 1, Red List BoCC	17 (4)		1 (2)	177 (2)	2 (1)	10 (3)	11 (3)	Abundant

<sup>54</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.



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Species	Notable status	Site reference/total number of surveys <sup>54</sup>							Regional status
		030-WB1-166025	030-WB1-167026	030-WB1-167027	030-WB1-167028	030-WB1-168029	030-WB1-170030	030-WB1-171031	
Gadwall	Amber List BoCC						4 (2)		Frequent and increasing
Green sandpiper	Schedule 1, Amber List BoCC				1 (1)				Frequent
Green woodpecker	Amber List BoCC	1 (1)			1 (1)		2 (1)	1 (3)	Fairly common
Grey partridge	Red List BoCC, SPI	5 (3)			5 (1)				Fairly common
Grey wagtail	Amber List BoCC				1 (1)		1 (1)		Fairly common
Greylag goose	Amber List BoCC						13 (1)		Frequent feral
Herring gull	Red List BoCC, SPI			1 (1)					Common
House sparrow	Red List BoCC, SPI	6 (3)	4 (1)			4 (1)			Abundant
Jack snipe	Amber List BoCC				3 (1)				Frequent
Kestrel	Amber List BoCC	1 (2)					1 (3)	1 (2)	Fairly common
Kingfisher	Schedule 1, Annex 1, Amber List BoCC					1 (2)			Fairly common
Lapwing	Red List BoCC, SPI				27 (1)		3 (2)		Common
Lesser black-backed gull	Amber List BoCC	27 (4)	3 (2)	1 (1)	2 (1)	3 (2)			Very common
Lesser redpoll	Red List BoCC, SPI					1 (1)	10 (2)		Fairly common
Linnet	Red List BoCC, SPI	3 (1)		60 (1)				4 (1)	Partial migrant, fewer in winter
Little egret	Annex 1, Amber List BoCC				3 (1)	2 (1)			Uncommon
Little grebe	Amber List BoCC						1 (1)		Fairly common
Mallard	Amber List BoCC		2 (1)	1 (1)	9 (2)	15 (4)	14 (3)		Common

Species	Notable status	Site reference/total number of surveys <sup>54</sup>							Regional status
		030-WB1-166025	030-WB1-167026	030-WB1-167027	030-WB1-167028	030-WB1-168029	030-WB1-170030	030-WB1-171031	
Meadow pipit	Amber List BoCC			1 (1)					Fairly common
Mistle thrush	Amber List BoCC	1 (1)	1 (1)	2 (2)					Common
Oystercatcher	Amber List BoCC						2 (1)		Frequent passage, scarce winter
Pochard	Amber List BoCC						15 (4)		Common
Redwing	Schedule 1, Red List BoCC	10 (3)	2 (2)	3 (3)	39 (2)	14 (3)	7 (3)	51 (4)	Abundant
Reed bunting	Amber List BoCC, SPI	1 (1)			1 (1)			1 (1)	Common
Shelduck	Amber List BoCC						2 (1)		Frequent
Skylark	Red List BoCC, SPI				2 (2)		2 (1)	4 (1)	Abundant
Snipe	Amber List BoCC				13 (1)		1 (1)		Fairly common
Song thrush	Red List BoCC, SPI	4 (4)	1 (1)	2 (2)	2 (3)		2 (2)	1 (4)	Abundant
Starling	Red List BoCC, SPI	3 (2)	2 (1)	7 (1)	6 (1)				Very common to abundant
Stock dove	Amber List BoCC						2 (3)		Very common
Tufted duck	Amber List BoCC						23 (3)		Common
Woodcock	Amber List BoCC						1 (1)		Frequent or fairly common
Yellowhammer	Red List BoCC, SPI	2 (2)		1 (1)	1 (2)	1 (1)	1 (1)	3 (2)	Very common to abundant

5.4.36 Vantage point surveys were also carried out at two locations within this area (030-WB1-168029 and 030-WB1-170030) with 15 species of interest recorded. Species of interest were considered to be species which possess flight behaviours which could bring them into conflict with the proposed viaduct, such as poor flight manoeuvrability. Each species height was recorded flying across the site. The height bands relate to 10 metre bands ranging between ground level up to 50m metres above ground level.

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Table 120: Records of birds recorded during VP surveys within 030-WB1-168029

Species	Latin name	Status	Total number of times flown at this flight band within 36-hour period (maximum count of birds)		
			0-10m	10-20m	20+m
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	0	1 (19)	6 (6)
Buzzard	<i>Buteo buteo</i>		7 (1)	14 (1)	19 (2)
Cormorant	<i>Phalacrocorax carbo</i>		11 (2)	15 (11)	18 (11)
Canada goose	<i>Branta canadensis</i>		0	1 (3)	0
Little egret	<i>Egretta garzetta</i>	Annex 1, Amber List BoCC	3 (1)	2 (1)	2 (1)
Goosander	<i>Mergus merganser</i>		0	0	1 (1)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	0	1 (25)	3 (35)
Grey heron	<i>Ardea cinerea</i>		1 (1)	6 (1)	8 (3)
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	0	0	4 (1)
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	0	1 (50)	2 (50)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	0	0	1 (1)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	16 (8)	17 (8)	20 (6)
Mute swan	<i>Cygnus olor</i>		1 (3)	1 (3)	1 (1)
Peregrine	<i>Falco peregrinus</i>	Schedule 1, Annex 1	0	0	4 (1)
Sparrowhawk	<i>Accipiter nisus</i>		1 (1)	5 (1)	6 (1)

Table 121: Records of birds recorded during VP surveys within 030-WB1-170030

Species	Latin name	Status	Total number of times flown at this flight band within 36-hour period (maximum count of birds)		
			0-10m	10-20m	20+m
Buzzard	<i>Buteo buteo</i>		7 (2)	7 (2)	6 (3)
Barn owl	<i>Tyto alba</i>	Schedule 1, Amber List BoCC	2 (1)	0	0
Cormorant	<i>Phalacrocorax carbo</i>		3 (1)	11 (2)	14 (3)
Canada goose	<i>Branta canadensis</i>		0	3 (3)	2 (3)
Golden Plover	<i>Pluvialis apricaria</i>	Annex 1, Amber List BoCC	0	0	1 (30)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	1 (2)	7 (35)	2 (35)
Grey heron	<i>Ardea cinerea</i>		1 (1)	0	0
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	30 (1)	7 (1)	0
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	5 (60)	1 (1)	2 (40)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	4 (3)	9 (4)	5 (4)
Mute swan	<i>Cygnus olor</i>		2 (1)	0	1 (23)

Species	Latin name	Status	Total number of times flown at this flight band within 36-hour period (maximum count of birds)		
			0-10m	10-20m	20+m
Oystercatcher	<i>Haematopus ostralegus</i>	Amber List BoCC	1 (2)	0	0
Shelduck	<i>Tadorna tadorna</i>	Amber List BoCC	1 (2)	0	0
Sparrowhawk	<i>Accipter nisus</i>		3 (1)	1 (1)	0

### Desk study

- 5.4.37 There are two statutory sites within 5km of the route of the Proposed Scheme within CFA20 which have been designated due to their bird populations.
- 5.4.38 Whitacre Heath SSSI lies over 500m from the land required for the construction of the Proposed Scheme. It is a former gravel quarry notified for its breeding wetland bird assemblage. A wide range of species are included in the citation and include wildfowl (e.g. teal), waders (e.g. snipe and redshank), and warblers (e.g. reed warbler and grasshopper warbler) associated with the wetland habitats. Short-eared owl and hen harrier overwinter and roost within the site. The SSSI is one of a chain of water bodies within the floodplain of the River Tame.
- 5.4.39 Middleton Pool Site of Special Scientific Interest (SSSI) and Middleton Pool Local Nature Reserve (LNR) have the same boundary, and are located adjacent to the land required for construction of the Proposed Scheme. The lake and surrounding habitat noted for its breeding avifauna, in particular, wildfowl and woodland bird species.
- 5.4.40 There are eight non-statutory sites within 5km of the route of the Proposed Scheme within CFA20 which mention birds in their designation. Of these, North Wood LWS falls within the Proposed Scheme and will be directly impacted. This site supports a range of common woodland species.
- 5.4.41 There are two records of barn owl within 1.5km of the route of the Proposed Scheme. Further details can be found in Section 4.

### Discussion

- 5.4.42 Wintering populations of notable species were recorded within all of the sites surveyed.
- 5.4.43 No regularly occurring notable bird populations considered to be 1% or more of the estimated county population<sup>55</sup> were recorded.

### CFA21: Drayton Bassett, Hints and Weeford

- 5.4.44 Five sites were surveyed within CFA21 for wintering bird, totalling an area of approximately 468Ha:
- 030-WB1-172032; arable, 39.6ha (Brook Farm, to the north of Middleton);
  - 030-WB1-173033; arable, 111.4ha (Hill Farm, west of Drayton Bassett);

<sup>55</sup> County estimates have been established based on regional estimates of the 2009 West Midland Breeding Bird Report and UK estimates taken from Musgrove et al. (2013).

- 030-WB1-176034; grassland, 54.4ha (arable fields to the south-east of Hints, includes Roundhill Wood);
- 030-WB1-177035; arable (129.9ha) and grassland (19.4ha) (Bucks Head Farm, to the east of Weeford); and
- 030-WB1-179036; arable (90.4ha) and grassland (23.0ha) (Packington Moor Farm, including Moor Covert, to the south-west of Whittington Heath).

5.4.45 A total of 69 species were recorded within CFA21 during the winter 2012/13 surveys, of which 32 are notable:

- thirty-nine species were recorded at Brook Farm (030-WB1-172032), of which 16 species are notable;
- forty-two species were recorded at Hill Farm (030-WB1-173033), of which 17 species are notable;
- fifty-two species were recorded within arable fields to the south-east of Hints (030-WB1-176034), of which 21 species are notable;
- fifty-seven species were recorded at Bucks Head Farm (030-WB1-177035), of which 26 species are notable; and
- thirty-seven species were recorded at Packington Moor Farm (030-WB1-179036), of which 12 species are notable.

Table 122: The maximum count of notable bird species recorded within CFA21 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>56</sup>					Regional status
		030-WB1-172032	030-WB1-173033	030-WB1-176034	030-WB1-177035	030-WB1-179036	
Black-headed gull	Amber List BoCC	5 (2)	76 (2)	10 (2)	75 (4)	784 (4)	Abundant
Bullfinch	Amber List BoCC, SPI	3 (1)	3 (1)	3 (4)	3 (2)		Common
Common gull	Amber List BoCC		1 (1)			831 (4)	Common
Corn bunting	Red List BoCC, SPI				13 (4)		Fairly common
Duncock	Amber List BoCC, SPI	3 (2)	1 (1)	7 (4)	12 (4)	1 (2)	Abundant
Fieldfare	Schedule 1, Red List BoCC	160 (3)	49 (4)	12 (3)	52 (4)	101 (3)	Abundant
Great black-backed gull	Amber List BoCC			1 (1)			Fairly common
Green woodpecker	Amber List BoCC	1 (1)		1 (2)			Fairly common
Grey partridge	Red List BoCC, SPI	2 (1)			45 (4)		Fairly common
Herring gull	Red List BoCC, SPI				10 (1)		Common
House sparrow	Red List BoCC, SPI		1 (1)		40 (3)	7 (3)	Abundant

<sup>56</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.

Species	Notable status	Site reference/total number of surveys <sup>56</sup>					Regional status
		030-WB1-172032	030-WB1-173033	030-WB1-176034	030-WB1-177035	030-WB1-179036	
Kestrel	Amber List BoCC	1 (1)		1 (3)	2 (4)		Fairly common
Kingfisher	Schedule 1, Annex 1, Amber List BoCC		1 (1)	2 (2)	1 (2)		Fairly common
Lapwing	Red List BoCC, SPI		9 (1)				Common
Lesser black-backed gull	Amber List BoCC		5 (1)	1 (1)	35 (2)	400 (4)	Very common
Lesser redpoll	Red List BoCC, SPI			2 (1)	2 (1)		Fairly common
Linnet	Red List BoCC, SPI		100 (3)		72 (3)	4 (1)	Partial migrant, fewer in winter
Mallard	Amber List BoCC	3 (1)	49 (4)	54 (4)	37 (3)	2 (1)	Common
Meadow pipit	Amber List BoCC			1 (1)	1 (2)		Fairly common
Mistle thrush	Amber List BoCC			4 (4)	3 (4)		Common
Peregrine	Schedule 1, Annex 1	1 (1)					Uncommon
Redwing	Schedule 1, Red List BoCC	22 (3)	186 (4)	44 (4)	23 (4)	142 (3)	Abundant
Reed bunting	Amber List BoCC, SPI	3 (3)			5 (3)		Common
Skylark	Red List BoCC, SPI	33 (3)	6 (1)	2 (1)	27 (4)	6 (4)	Abundant
Snipe	Amber List BoCC	1 (1)	1 (2)		5 (2)		Fairly common
Song thrush	Red List BoCC, SPI	1 (1)	1 (1)	4 (4)	9 (4)		Abundant
Starling	Red List BoCC, SPI	40 (4)	51 (2)	16 (2)	80 (4)	449 (4)	Very common to abundant
Stock dove	Amber List BoCC			6 (3)	11 (3)		Very common
Teal	Amber List BoCC			4 (1)	9 (3)		Common
Tree sparrow	Red List BoCC, SPI				12 (2)		Fairly common
Woodcock	Amber List BoCC			1 (1)			Frequent or fairly common
Yellowhammer	Red List BoCC, SPI	36 (4)	1 (1)	1 (1)	61 (4)	31 (4)	Very common to abundant

### Desk study

5.4.46 There are no statutory sites within 5km of the route of the Proposed Scheme within CFA21 which have been designated due to their bird populations.

5.4.47 There are 17 non-statutory sites within 5km of the route of the Proposed Scheme within CFA21 which mention birds in their designation, although none of the species mentioned are considered to be relevant to the assessment.

5.4.48 A total of five notable species have records within 1km of the route of the Proposed Scheme (see Table 123).

Table 123: Notable species records within 1km of the route of the Proposed Scheme

Common name	Status	Number of records within 1km of the route
Brambling	Schedule 1	One record
Fieldfare	Schedule 1, Red List BoCC	Three records
Green sandpiper	Schedule 1, Amber List BoCC	Two records
Peregrine	Schedule 1, Annex 1	One record
Redwing	Schedule 1, Red List BoCC	Three records

5.4.49 Of these species, fieldfare, peregrine and redwing were recorded during the winter bird surveys.

5.4.50 Bramblings are relatively common winter visitors, typically found in woodland and arable farmland habitats, whereas green sandpipers are scarce winter visitors, typically found within wetland sites. Brambling and green sandpiper were recorded within other CFAs and it is considered that if they were present within the CFA21 survey areas, they would have been recorded.

5.4.51 There is one barn owl record within 1.5km of the route of the Proposed Scheme (see Section 4 for details).

### Discussion

5.4.52 Wintering populations of notable species were recorded within all five sites surveyed. However, regularly occurring notable bird populations considered to be 1% or more of the estimated county population<sup>57</sup> were also recorded at Bucks Head Farm (030-WB1-177035) and Packington Moor Farm (030-WB1-179036) (see Table 124).

Table 124: Notable bird species wintering populations recorded at 1% of county population or above within CFA21

Species	Site	Maximum number of birds recorded	Number of surveys present (out of 4 visits)	Estimated wintering population for West Midlands	Percentage of regional population	Comments
Corn bunting	030-WB1-177035	13	4	500-5,000	0.3-3%	Corn bunting was recorded on all four visits and therefore the site is considered to be regularly used by 1% or more of the estimated county population of wintering corn bunting.
Grey partridge	030-WB1-177035	45	4	500-5,000	0.9-9%	Grey partridge was recorded on all four visits and therefore the site is considered to be regularly used by 1% or more of the estimated county population of wintering grey partridge.

<sup>57</sup> County estimates have been established based on regional estimates of the 2009 West Midland Breeding Bird Report and UK estimates taken from Musgrove et al. (2013).

Species	Site	Maximum number of birds recorded	Number of surveys present (out of 4 visits)	Estimated wintering population for West Midlands	Percentage of regional population	Comments
Tree sparrow	030-WB1-177035	12	2	500-5,000	0.2-2%	Tree sparrow was recorded on all four visits and therefore the site is considered to be regularly used by 1% or more of the estimated county population of wintering tree sparrow.
Common gull	030-WB1-179036	831	4	5,000-20,000	4-17%	Common gull was recorded on all winter visits at counts exceeding 1% of the lower range of the estimated regional wintering population.  Approximately 680-730,000 common gulls overwinter in the UK, so the lower range of the estimated regional wintering population may be an underestimate, but the large counts are still considered likely to be greater than 1% of the wintering county population.
Lesser black-backed gull	030-WB1-179036	400	4	5,000-20,000	2-8%	Approximately 120-130,000 lesser black-backed gulls overwinter in the UK, so the lower range of the estimated regional wintering population may be a fair estimate.  Lesser black-backed gull was recorded on all winter visits at counts exceeding 1% of the estimated county population.

## CFA22: Whittington to Handsacre

5.4.53 Nine sites were surveyed within CFA22 for wintering birds, totalling an area of approximately 198ha:

- 030-WB1-181037; grassland, 60.8ha (Whittington Heath Golf Course, Whittington Heath);
- 030-WB1-183038; canal, 3.0ha (Coventry Canal);
- 030-WB1-185039; arable, 11.2ha (Orchard Farm, south of Fradley Business Park);
- 030-WB1-186040; industrial and arable, 12.3ha (Auction Centre and arable field, Fradley Business Park);
- 030-WB1-188041; woodland, 4.6ha (Fradley Gorse, west of Fradley);
- 030-WB1-188042 and 030-WB1-189043; woodland, 26.4ha (Ravenshaw Wood and Black Slough Wood, west of Fradley);
- 030-WB1-189044; arable 38.0ha (arable fields to the south of King's Bromley Wharf Marina);
- 030-WB1-190045; arable, 33.5ha (arable fields to the immediate west of King's



Bromley Wharf Marina); and

- 030-WB1-192046; arable, 6.7ha (arable field to the immediate south of Handsacre).

5.4.54 In addition a vantage point was located within CFA22. This was surveyed between October 2012 and February 2013, recording flights of notable waterbirds. The vantage point was located in the arable fields to the west of King's Bromley Wharf Marina, covering the potential flight path between King's Bromley Wharf Marina and Hanch Reservoir.

5.4.55 A total of 57 species were recorded within CFA22 during the winter 2012/13 surveys, of which 26 are notable:

- thirty-one species were recorded at Whittington Heath Golf Course (030-WB1-181037), of which nine species are notable;
- thirty-two species were recorded along Coventry Canal (030-WB1-183038), of which 12 species are notable;
- thirty-one species were recorded at Orchard Farm (030-WB1-185039), of which 12 species are notable;
- twenty-three species were recorded at Fradley Business Park Auction Centre and arable field (030-WB1-184040), of which eight species are notable;
- thirty-five species were recorded at Fradley Gorse (030-WB1-188041), of which 13 species are notable;
- twenty-eight species were recorded at Ravenshaw and Black Slough Woods (030-WB1-188042 and 030-WB1-189043), of which five species are notable;
- thirty-three species were recorded within arable fields to the south of King's Bromley Wharf Marina (030-WB1-189044), of which 13 species are notable;
- forty-one species were recorded within arable fields to the immediate west of King's Bromley Wharf Marina (030-WB1-190045), of which 18 species are notable; and
- twenty-five species were recorded within arable fields to the south of Handsacre (030-WB1-192046), of which eight species are notable.

Table 125: The maximum count of notable bird species recorded within CFA22 during winter bird surveys

Species	Notable status	Site reference/total number of surveys <sup>58</sup>									Regional status
		030-WB1-181037	030-WB1-183038	030-WB1-185039	030-WB1-186040	030-WB1-188041	030-WB1-188042 and 030-WB1-189043	030-WB1-189044	030-WB1-190045	030-WB1-192046	
Black-headed gull	Amber List BoCC	25 (1)	7 (1)			21 (1)		26 (1)	8 (2)		Abundant
Bullfinch	Amber List BoCC, SPI		2 (1)	3 (2)	3 (3)	3 (3)	1 (1)	1 (2)	4 (3)		Common
Common gull	Amber List BoCC			35 (2)	2 (1)	15 (1)					Common
Dunnock	Amber List BoCC, SPI	7 (3)	7 (3)	1 (1)	2 (4)	1 (1)	3 (2)	4 (4)	4 (3)	3 (4)	Abundant
Fieldfare	Schedule 1, Red List BoCC		25 (2)	128 (4)		4 (1)		76 (4)	40 (3)	37 (2)	Abundant
Green woodpecker	Amber List BoCC	1 (1)		1 (1)							Fairly common
Grey wagtail	Amber List BoCC		1 (1)			1 (1)					Fairly common
House sparrow	Red List BoCC, SPI					3 (3)				20 (4)	Abundant
Kestrel	Amber List BoCC		1 (1)	1 (1)				1 (1)	2 (2)		Fairly common
Lapwing	Red List BoCC, SPI		47 (1)		50 (1)	50 (1)					Common
Lesser black-backed gull	Amber List BoCC			1 (1)							Very common
Lesser redpoll	Red List BoCC, SPI	1 (2)		1 (2)			22 (3)	1 (1)	18 (3)		Fairly common
Linnet	Red List BoCC, SPI								25 (1)		Partial migrant, fewer in winter
Mallard	Amber List BoCC		17 (4)			1 (2)			4 (1)		Common
Meadow pipit	Amber List BoCC								2 (1)	1 (1)	Fairly common
Mistle thrush	Amber List BoCC	5 (3)	3 (1)			1 (1)		2 (1)			Common

<sup>58</sup> Total number of surveys on which species were recorded (out of four) is shown in brackets.

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Species	Notable status	Site reference/total number of surveys <sup>58</sup>									Regional status
		030-WB1-181037	030-WB1-183038	030-WB1-185039	030-WB1-186040	030-WB1-188041	030-WB1-188042 and 030-WB1-189043	030-WB1-189044	030-WB1-190045	030-WB1-192046	
Peregrine	Schedule 1, Annex 1							2 (1)	1 (2)		Uncommon
Redwing	Schedule 1, Red List BoCC	15 (3)	11 (3)	75 (4)	8 (1)	8 (1)		25 (4)	60 (3)		Abundant
Reed bunting	Amber List BoCC, SPI								6 (2)		Common
Skylark	Red List BoCC, SPI				1 (1)				6 (2)	1 (1)	Abundant
Song thrush	Red List BoCC, SPI	11 (3)	1 (1)	1 (2)		1 (2)	1 (1)	2 (4)	3 (3)		Abundant
Starling	Red List BoCC, SPI	14 (1)	13 (2)	100 (2)	1 (1)			16 (3)	40 (3)	82 (4)	Very common to abundant
Stock dove	Amber List BoCC							3 (2)	1 (1)	3 (1)	Very common
Tree sparrow	Red List BoCC, SPI					1 (1)			26 (2)		Fairly common
Woodcock	Amber List BoCC	1 (1)					2 (2)				Frequent or fairly common
Yellowhammer	Red List BoCC, SPI			18 (2)	20 (1)			5 (3)	56 (4)	35 (4)	Very common to abundant

- 5.4.56 Vantage point surveys were also carried out within this area (030-WB1-190045) with 12 species of interest recorded. Each species height was recorded flying across the site. The height bands relate to 10 metre bands ranging between ground level up to 50m metres above ground level.

Table 126: Records of birds recorded during VP surveys within 030-WB1-190045

Species	Latin name	Status	Total number of times flown at this flight band within 36-hour period (maximum count of birds)		
			0-10m	10-20m	20+m
Black-headed gull	<i>Larus ridibundus</i>	Amber List BoCC	0	0	3 (2)
Buzzard	<i>Buteo buteo</i>		0	3 (2)	7 (2)
Cormorant	<i>Phalacrocorax carbo</i>		0	0	1 (1)
Canada goose	<i>Branta canadensis</i>		0	1 (3)	0
Golden plover	<i>Pluvialis apricaria</i>	Annex 1, Amber List BoCC	0	0	1 (12)
Greylag goose	<i>Anser anser</i>	Amber List BoCC	0	1 (2)	0
Grey heron	<i>Ardea cinerea</i>		0	0	1 (1)
Kestrel	<i>Falco tinnunculus</i>	Amber List BoCC	3 (1)	2 (1)	2 (1)
Lapwing	<i>Vanellus vanellus</i>	Red List BoCC, SPI	0	0	1 (17)
Lesser black-backed gull	<i>Larus fuscus</i>	Amber List BoCC	0	1 (2)	3 (2)
Mallard	<i>Anas platyrhynchos</i>	Amber List BoCC	0	0	1 (1)
Sparrowhawk	<i>Accipiter nisus</i>		0	2 (1)	2 (1)

### Desk study

- 5.4.57 There are no statutory sites within 5km of the route of the Proposed Scheme within the area which have been designated due to their bird populations.
- 5.4.58 There are 24 non-statutory sites within 5km of the route of the Proposed Scheme within CFA22 which mention birds in their designation. None of which are within, or adjacent to, the land required for construction of the Proposed Scheme.
- 5.4.59 A total of nine notable species have records within 1km of the route of the Proposed Scheme.

Table 127: Records of notable species within 1km of the route of the Proposed Scheme in CFA22

Common name	Status	Number of records within 1km of the route
Arctic tern	Annex 1, Amber List BoCC	One record
Brambling	Schedule 1	Two records
Fieldfare	Schedule 1, Red List BoCC	Four records
Green sandpiper	Schedule 1, Amber List BoCC	Three records
Golden plover	Annex 1, Amber List BoCC	Two records
Redwing	Schedule 1, Red List BoCC	Three records

Common name	Status	Number of records within 1km of the route
Redshank	Amber List BoCC	One record
Bewick's swan	Schedule 1, Annex 1, Amber List BoCC, SPECIES OF PRINCIPAL IMPORTANCE	One record
Whooper swan	Schedule 1, Annex 1, Amber List BoCC	Seven records

- 5.4.60 Of these species, all but arctic tern are potential overwintering species.
- 5.4.61 Fieldfare, golden plover, and redwing were recorded during the winter surveys.
- 5.4.62 Bramblings are relatively common winter visitors, typically found in woodland and arable farmland habitats. Brambling was recorded within other CFAs and it is considered that if they were present within the CFA22 survey areas, they would have been recorded.
- 5.4.63 Green sandpiper, redshank, Bewick's swan and whooper swan are scarce winter visitors to this region and are typically found within wetland sites. It is considered that if they were present within the wetland areas surveyed within CFA22, they would have been recorded.
- 5.4.64 There are a total of 42 barn owl records within 1.5km of the route of the Proposed Scheme. See Section 4 for details.
- Discussion*
- 5.4.65 Wintering populations of notable species were recorded within all of the sites surveyed. However, only one regularly occurring notable bird population considered to be supporting 1% or more of the estimated county population was recorded: up to 26 tree sparrows were recorded overwintering within arable fields to the immediate west of King's Bromley Wharf Marina (030-WB1-190045).
- 5.4.66 In addition, the wintering lesser redpoll population at Ravenshaw and Black Slough Woods (030-WB1-188042 and 030-WB1-189043) was thought to be just under 1% of the county estimate (see Table 128).

Table 128: Notable bird species wintering populations potentially recorded at 1% of county population or above within CFA22

Species	Site	Maximum number of birds recorded	Number of surveys present (out of 4 visits)	Estimated wintering population for West Midlands	Percentage of regional population	Comments
Lesser redpoll	030-WB1-188042 and 030-WB1-189043	22	3	500-5,000	0.4-4%	With an estimate of 220,000 lesser redpolls overwintering in the UK, the lower range of the regional estimate is thought to be an underestimate.  Therefore this site is considered to regularly support a population of less than 1% of the county population.

Species	Site	Maximum number of birds recorded	Number of surveys present (out of 4 visits)	Estimated wintering population for West Midlands	Percentage of regional population	Comments
Tree sparrow	030-WB1-190045	26	2	500-5,000	0.5-5%	Tree sparrow was recorded at numbers exceeding 1% of lower range of the regional estimate on two occasions. Therefore the site is considered to be used regularly by 1% of the county population.